THE JOURNAL OF INFECTIOUS DISEASES • VOL. 159, NO. 6 • JUNE 1989
© 1989 by The University of Chicago. All rights reserved. 0022-1899/89/5906-0038$01.00

INDEX TO VOLUME 159

Author Index

Abadie, S. M., 156
Abdillahi, H., 686
Abramovits, W., 150
Abrams, D. I., 1029
Abzug, M. J., 761
Achtman, M., 686
Addiss, D. G., 572
Adelmann, A., 340
Agins, B. D., 784
Ahmad, S., 154
Ahmed, F., 770
Ahmed, Z. U., 144
Aiuti, F., 332
Al-Obeid, S., 1095, 1132
Alcid, D. V., 35
Allan, W., 1119
Alpers, M. P., 348
Alvarez, N., 748
Amann, S., 1025
Anderson, J. F., 43
Anderson, P., 1135
Anderson, R., 966
Andersson, J., 1037
Andre, F. E., 452
Andrew, M. E., 1119
Andriole, V. T., 717
Angarano, G., 1156
Antinori, S., 977
Armstrong, J. A., 472
Aronoff, S., 586
Arredondo-Garcia, J. L., 1003
Atchison, R. W., 472
Atichartakarn, V., 274
Attridge, S. R., 145
Aurelian, L., 625
Azancot, A., 938
Bacchetti, P., 1029
Bagby, G. J., 189
Bailey, S. R., 503
Bainton, B. G., 189
Baker, J. R., Jr., 357
Balasubramanian, K. A., 881
Banatvala, N., 1025
Baquero, M., 219
Barbanera, M., 1156
Barbour, A. G., 43
Barceló, J., 598
Barker, J., 348
Barlow, M. A., 837
Barnett, C. C., 979
Barnhart, J. L., 569
Barrett, T. J., 774
Barriere, S. L., 593
Bartlett, A. V., 71
Baskin, G., 331
Bastian, J. F., 1083
Bathras, J. M., 701
Battaglia, M., 335
Batteiger, B. E., 661
Bean, W. J., 1050
Beaver, T. R., 809
Beck, J. S., 549
Beckius, M. L., 503
Beckmann, A. M., 293
Begum, Y. A., 144
Belec, L., 324
Belshe, R. B., 430
Beltran-Zuniga, M., 1003
Benach, J. L., 265
Bennett, W. M., 945
Berman, D. S., 784
Bernard, E., 143
Bernstein, D. I., 79, 89
Beyer, L., 145
Bhaibulaya, M., 543
Bhan, M. K., 1061
Bhandari, N., 1061
Bhatia, G., 1115
Bibb, W. F., 680
Bille, J., 806, 989
Binn, L. N., 155
Birch, D. F., 226
Bishop, R. F., 335
Bizet, C., 1005
Black, R. E., 452
Black, W. J., 205
Blacklow, N. R., 543
Blanchard, J., 331
Blaschke, T. F., 1115
Blattner, W. A., 603
Blum, M. R., 745
Boehm, G., 145
Bolivar, R., 150
Bollini, G., 1159
Bolme, P., 610
Bonaldi, V., 143
Bothamley, G. H., 549
Böttiger, M., 610
Bouvet, A., 938
Boyer, A. E., 50
Boyle, D. B., 1119
Bozzette, S. A., 822
Bradley, D. W., 1042
Bradshaw, P., 436
Brady, W. E., 900
Brais, L. J., 460
Brand, J. A., 50
Brandtzaeg, P., 195
Bratoeva, M. P., 648
Breinig, M. K., 472
Brideau, R. J., 255
Britton, S., 1037
Brommer, E. J. P., 780
Broome, C. V., 680
Browder, W., 1088
Brummitt, C., 480
Bruu, A.-L., 1111
Bruun, J. N., 195
Bryson, Y., 845
Buiting, A. G. M., 780
Bullock, M., 480
Burchard, G. D., 303
Buré, A., 1005
Burk, B., 430
Cajot, A., 806
Calame, W., 281
Calandra, T., 802
Calderon-Jaimes, E., 1003
Calomeni, E., 71
Campo, E., 809
Cantoni, L., 989
Cao, Y. Y., 621
Carbon, C., 938
Caredda, F., 977
Carles, D., 143
Carr, H., 586
Castilla, A., 362
Catto, B. A., 589
Cerquetti, M. C., 232
Cerruti, R. L., 430
Chaisson, R. E., 96, 1029
Chakraborty, J., 770
Chandler, S. H., 123
Chaowagul, W., 654, 890
Chave, J. P., 806
Chen, N. L., 621
Chia, J. K. S., 113, 168, 872
Chiba, S., 71
Child, C., 1115
Chilean Typhoid Committee, 766
Chipley, J. R., 103
Chou, T.-C., 248, 837
Christensen, R. D., 518
Chu, C. M., 621
Civeira, M. P., 362
Clabots, C. R., 340
Clark-Curtiss, J. E., 7
Clausen, C. R., 344
Clayden, S., 1025
Cleary, P. P., 101
Cleeland, R., 1065
Clemens, J. D., 770
Coleman, J. L., 265
Collier, A. C., 123
Collins, H. H., 1073
Conde-Glez, C. J., 1003
Conley, F. K., 790
Conly, J. M., 310

THE JOURNAL OF INFECTIOUS DISEASES • VOL. 159, NO. 6 • JUNE 1989
© 1989 by The University of Chicago. All rights reserved. 0022-1899/89/5906-0038$01.00

INDEX TO VOLUME 159

Author Index

Abadie, S. M., 156
Abdillahi, H., 686
Abramovits, W., 150
Abrams, D. I., 1029
Abzug, M. J., 761
Achtman, M., 686
Addiss, D. G., 572
Adelmann, A., 340
Agins, B. D., 784
Ahmad, S., 154
Ahmed, F., 770
Ahmed, Z. U., 144
Aiuti, F., 332
Al-Obeid, S., 1095, 1132
Alcid, D. V., 35
Allan, W., 1119
Alpers, M. P., 348
Alvarez, N., 748
Amann, S., 1025
Anderson, J. F., 43
Anderson, P., 1135
Anderson, R., 966
Andersson, J., 1037
Andre, F. E., 452
Andrew, M. E., 1119
Andriole, V. T., 717
Angarano, G., 1156
Antinori, S., 977
Armstrong, J. A., 472
Aronoff, S., 586
Arredondo-Garcia, J. L., 1003
Atchison, R. W., 472
Atichartakarn, V., 274
Attridge, S. R., 145
Aurelian, L., 625
Azancot, A., 938
Bacchetti, P., 1029
Bagby, G. J., 189
Bailey, S. R., 503
Bainton, B. G., 189
Baker, J. R., Jr., 357
Balasubramanian, K. A., 881
Banatvala, N., 1025
Baquero, M., 219
Barbanera, M., 1156
Barbour, A. G., 43
Barceló, J., 598
Barker, J., 348
Barlow, M. A., 837
Barnett, C. C., 979
Barnhart, J. L., 569
Barrett, T. J., 774
Barriere, S. L., 593
Bartlett, A. V., 71
Baskin, G., 331
Bastian, J. F., 1083
Bathras, J. M., 701
Battaglia, M., 335
Batteiger, B. E., 661
Bean, W. J., 1050
Beaver, T. R., 809
Beck, J. S., 549
Beckius, M. L., 503
Beckmann, A. M., 293
Begum, Y. A., 144
Belec, L., 324
Belshe, R. B., 430
Beltran-Zuniga, M., 1003
Benach, J. L., 265
Bennett, W. M., 945
Berman, D. S., 784
Bernard, E., 143
Bernstein, D. I., 79, 89
Beyer, L., 145
Bhaibulaya, M., 543
Bhan, M. K., 1061
Bhandari, N., 1061
Bhatia, G., 1115
Bibb, W. F., 680
Bille, J., 806, 989
Binn, L. N., 155
Birch, D. F., 226
Bishop, R. F., 335
Bizet, C., 1005
Black, R. E., 452
Black, W. J., 205
Blacklow, N. R., 543
Blanchard, J., 331
Blaschke, T. F., 1115
Blattner, W. A., 603
Blum, M. R., 745
Boehm, G., 145
Bolivar, R., 150
Bollini, G., 1159
Bolme, P., 610
Bonaldi, V., 143
Bothamley, G. H., 549
Böttiger, M., 610
Bouvet, A., 938
Boyer, A. E., 50
Boyle, D. B., 1119
Bozzette, S. A., 822
Bradley, D. W., 1042
Bradshaw, P., 436
Brady, W. E., 900
Brais, L. J., 460
Brand, J. A., 50
Brandtzaeg, P., 195
Bratoeva, M. P., 648
Breinig, M. K., 472
Brideau, R. J., 255
Britton, S., 1037
Brommer, E. J. P., 780
Broome, C. V., 680
Browder, W., 1088
Brummitt, C., 480
Bruu, A.-L., 1111
Bruun, J. N., 195
Bryson, Y., 845
Buiting, A. G. M., 780
Bullock, M., 480
Burchard, G. D., 303
Buré, A., 1005
Burk, B., 430
Cajot, A., 806
Calame, W., 281
Calandra, T., 802
Calderon-Jaimes, E., 1003
Calomeni, E., 71
Campo, E., 809
Cantoni, L., 989
Cao, Y. Y., 621
Carbon, C., 938
Caredda, F., 977
Carles, D., 143
Carr, H., 586
Castilla, A., 362
Catto, B. A., 589
Cerquetti, M. C., 232
Cerruti, R. L., 430
Chaisson, R. E., 96, 1029
Chakraborty, J., 770
Chandler, S. H., 123
Chaowagul, W., 654, 890
Chave, J. P., 806
Chen, N. L., 621
Chia, J. K. S., 113, 168, 872
Chiba, S., 71
Child, C., 1115
Chilean Typhoid Committee, 766
Chipley, J. R., 103
Chou, T.-C., 248, 837
Christensen, R. D., 518
Chu, C. M., 621
Civeira, M. P., 362
Clabots, C. R., 340
Clark-Curtiss, J. E., 7
Clausen, C. R., 344
Clayden, S., 1025
Cleary, P. P., 101
Cleeland, R., 1065
Clemens, J. D., 770
Coleman, J. L., 265
Collier, A. C., 123
Collins, H. H., 1073
Conde-Glez, C. J., 1003
Conley, F. K., 790
Conly, J. M., 310

Connor, J. D., 822
Connor, K., 1000
Contreras, R., 766
Cook, S., 811
Cooper, B., 803
Copeland, J. G., 829
Coppin, P., 977
Corey, L., 123, 328
Costello, C. M., 136
Costerton, J. W., 1065
Costigliola, P., 1156
Coupar, B. E. H., 1119
Coutinho, R. A., 1157
Cox, P., 239
Coyle, M. B., 670
Craig, W. A., 281
Cravioto, A., 1057
Cremer, K. J., 974
Cremieux, A.-C., 938
Critchlow, C. W., 293
Cross, A. S., 1073
Crowe, B. A., 686
Crowe, S., 1029
Crutcher, J. M., 576
Cunningham-Rundles, C., 147
Czarniecki, C. W., 331
Czinn, S., 586
D'Amaro, J., 549
Dance, D. A. B., 654, 890
Dasen, S. E., 526
Davis, J. P., 572
Davis, T. M. E., 654, 890
Dawson, J. E., 562
de Koning, J., 109
de la Concha, E. G., 219
de Léon, F. L., 804
De Meester, F., 303
de Miranda, P., 745
de Vries, R. R. P., 549
del Aguila, R., 452
Delaney, M., 416
Dellamonica, P., 143
Demmler, G. J., 1013
Deresinski, S. C., 556
Derrick, C. W., 1011
Dijkstra, J., 717
Dilger, P., 1025
Dilion, H. C., Jr., 1139
Dillon, M., 845
Dobek, A., 1073
Docherty, M. A., 7
Doherty, P. C., 1119
Dong, D. X., 621
Donohue-Rolfe, A., 881
Donowitz, L. G., 594
Donta, S. T., 1155
Dooley, D. P., 503
Douglas, J. M., 328
Drabick, J. J., 357
Drath, D. B., 239
Dubey, L., 358
Dudley, M. N., 593
DuPont, H. L., 1126
Durbahn, G., 984
Ebert, S., 281
Echaniz-Aviles, G., 1003
Echeverria, P., 543
Edmonds, K. L., 352
Ehrenfeld, E., 155
Ehrnst, A., 1037
El-Sadr, W., 784
Ellner, J. J., 352
Emeis, J. J., 780
Eppstein, D. A., 616
Ernst-Cabrera, K., 303
Espejo-Arenas, E., 1158
Espinoza, C. G., 556
Estes, M. K., 71
Estruch, R., 598, 809
Eurvilaichit, C., 274
Eustache, M., 363
Evans, A. S., 603
Evans, M. E., 872
Ewing, S. A., 576
Faden, H. S., 1018
Fairley, K. F., 226
Falkow, S., 205
Fall, H., 845
Fantin, B., 281
Faris, D. G., 680
Fauci, A. S., 467
Feder, H. M., Jr., 136
Feldman, A. R., 503
Feldman, H. A., 881
Fennell, C. L., 635
Ferreccio, C., 766
Festen, J. J. M., 109
Fihn, S. D., 400
Finkbeiner, H. C., 945
Fishbein, D. B., 562
Fisher, R. A., 837
Fitzgerald, J. M., 1007
Flegel, T., 274
Fleischmann, W. R., Jr., 127
Flores, B. M., 635, 794
Flores, J., 452
Fontán, P. A., 232
Formal, S. B., 1126
Forrest, B. D., 145
Forrester, G. D., 708
Forsgren, A., 1128
Forsgren, M., 1037
Foss, N. T., 787
Foung, S. K. H., 436
Fournier, J. P., 143
Fox, B. C., 488
Fox, C. H., 467
Fraiz, J., 661
Freedman, D. O., 1151
Frei, R., 1007
Frenkel, L., 845
Fridell, E., 610
Friedman, H. M., 860
Fujinami, R. S., 757
Furlini, G., 851
Gabel, C. A., 358
Gafà, S., 1156
Gahrton, G., 610
Gallais, H., 1159
Galloway, D. A., 293
Garcia, G., 1083
Garcia-Saucedo, V., 1160
Garratty, E., 845
Garrocho, C., 1160
Gaustad, P., 195
Gazapo, E., 219
Gekker, G., 480
Georges, A. J., 324
Gerding, D. N., 340
Gerna, G., 335, 452
Gershon, A., 358
Gigliotti, F., 366
Gil, A., 452
Gil, J., 219
Gilbert, D. N., 945
Gilstrap, L. C., III, 1001
Glass, R. I., 71, 753
Glauser, M. P., 802, 806, 959, 989
Gloff, C. A., 616
Gocke, D. J., 35
Goetz, M. B., 533
Goldsmith, C. H., 460
Goldstein, F. W., 1095
Gomes, J., 770
Gómez-Mateos, J. M., 804
Gönczöl, E., 851, 860
Gothefors, L., 753
Gradus, M. S., 572
Granfors, K., 1142
Granoff, D. M., 908
Gratten, H., 348
Gratten, M., 348
Gray, B. M., JI, 1011, 1139
Grayston, J. T., 1111
Greenberg, R., 802
Greenberg, S. J., 741
Greenwood, B. M., 139, 686
Grieco, M. H., 120
Grieves, K., 310
Griswold, W. R., 1083
Grogan, T. M., 829
Groman, N. B., 670
Grose, C., 444
Guelde, G., 168, 872
Guenounou, M., 641
Guglielmo, B. J., 1154
Guidinger, P. L., 866
Gutmann, L., 1005
Guttman, J. M., 805
Habicht, G. S., 265
Haley, M. L., 979
Halpern, J. L., 60
Halvorsen, S., 195

Hammond, T. L., 1001
Handsfield, H. H., 123
Hankins, G. D. V., 1001
Hansen, E. J., 917, 1135
Harding, G. K., 984
Harkess, J. R., 576
Harkonen, S., 1115
Harmon, S. A., 155
Harnisch, J. P., 670
Harper, D. R., 444
Harris, J. R., 770
Hassan-King, M., 686
Hawkins, E. P., 923
Hayes, P. S., 680
Hechemy, K. E., 805
Hedman, K., 736
Heesemann, J., 109
Hellström, M., 579
Hengstler, B., 26
Herzberg, A. J., 151
Hess, G., 815
Hexter, D., 680
Hightower, A. W., 680
Hill, H. R., 701
Hill, J. L., 1142
Hilton, E., 363
Hirose, M., 750
Hirsch, M. S., 837
Hirschhorn, R. B., 680
Hitt, J., 480
Ho, M., 472
Ho, W., 851
Hoffman, S. L., 803
Holguín, A. F., 725
Holmes, K. K., 293, 670
Holmgren, J., 770
Hoogkamp-Korstanje, J. A. A., 109
Hook, E. W., III, 900
Hooton, T. M., 400
Hornick, R. B., 1126
Houghton, D. C., 945
Houtman, P. M., 109
Howard, W., 1029
Hoy, J. F., 116
Hoyle, J., 1013
Hu, Z. H., 621
Huang, H. Y., 621
Huda, S., 770
Hughes, W. T., 366
Hull, S. I., 708
Humbert, G., 363
Huth, E. J., 407
Ianacone, J., 851
Icenogle, T. B., 829
Inderlied, C. B., 994
Isomura, S., 808
Istre, G. R., 576
Ivanyi, J., 549
Jabes, D., 16
Jacewicz, M., 881
Jackson, G. G., 365
Jacobs, J. L., 908
Jacobs, R., 1154
Jacobson, M. A., 1029
Jacobson, S., 741
James, J., 701
Jeffrey, B. S., 503
Jirasiritham, S., 274
Jodal, U., 579
John, J. F., Jr., 648
Johnson, C., 400
Johnson, D. R., 101
Johnson, J. R., 400
Johnson, S., 340
Johnson, V. A., 837
Johnston, J. M., 155
Jones, R. B., 661
Jubelt, B., 866
Juneja, H. S., 127
Juto, P., 753, 998
Kabeer, M., 908
Kadurugamuwa, J. L., 26
Kaiser, A. B., 954
Kajoi, M., 348
Kaper, J. B., 1061
Kapikian, A. Z., 452
Kapikian, A. Z., 753
Kaplan, E. L., 101
Kaplan, S. L., 923
Kardjito, T., 549
Katz, B. P., 661
Kaye, D., 526
Kean, B. H., 1160
Keeling, J. H., 503
Kelley, P. W., 562
Kelly, J. J., 360
Kennedy, C., 822
Kennedy, J. K., 984
Kernodle, D. S., 103
Keusch, G. T., 881
Khan, H. M., 154
Khan, M. R., 770
Khan, N., 154
Khanna, R., 154
Khoury, A. E., 1065
Kierulf, P., 195
Kingsley, L. A., 472
Kiviat, N. B., 293
Kleinfeld, D., 1155
Kline, M. W., 923
Kobayashi, S., 808
Kohl, S., 239, 328
Kohlhepp, S. J., 945
Kohnen, P. W., 945
Koles, N. L., 168, 872
Kolonoski, P. T., 994
Korzeniowski, O. M., 526
Kotler, D., 467
Koutsky, L. A., 293
Kovacs, J. A., 60
Kowalsky, S. F., 593
Krawczynski, K., 1042
Kresina, T. F., 798
Kreter, B., 593
Kudlac, J., 576
Kumar, H., 154
Kumar, R., 1061
Kunin, C. M., 594
Kuratana, M., 1135
Kusecek, B., 686
Kusuhara, K., 750
Labidi, A., 708
Labrada, M., 725
LaBrooy, J. T., 145
Lackman-Smith, C., 556
Lahesmaa-Rantala, R., 1142
Lahoz, J. G., 219
Lambert, H. P., 211
Lanata, C. F., 452
Lancaster, D., 954
Landers, D. V., 1105
Lappalainen, M., 736
Larsson, P. H., 1037
Laskin, O. L., 745
Lassiter, H. A., 518
Laubenstein, H. P., 815
Lauer, B. A., 748
Lautatzis, M., 984
Lazzarin, A., 1156
Lecomte, F., 363
Leelachaikul, P., 274
Leentvaar, A., 1157
Leggett, J. E., 281
Lehmann, D., 348
Leiderman, I., 147
Lemeland, J.-F., 363
Lemp, G. F., 569
Lennette, E. T., 436
Lerche, N. W., 757
Levin, M. J., 748, 761
Levine, M. M., 766, 1061, 1126
Levine, B., 147
Lexsomboon, U., 543
Li, H. M., 621
Liggitt, D., 331
Lin, J.-C., 248
Linde, A., 610
Lindsley, J., 945
Lipinski, C. M., 293
LiPuma, J. J., 526
Ljungman, P., 610
Loeb, M. R., 1135
Lohr, J. A., 594
Lomberg, H., 579
Lönnqvist, B., 610
Loo, L. S., 239
Looareesuwan, S., 654, 890
López-Córtes, L., 804
Lorber, B., 680
Lott, J. A., 139
Low, D. E., 984
Lucas, A. H., 1083
Lujan, A., 1151

Lundgren, B., 60
Lyter, D. W., 472
Mackowiak, P. A., 979
Madoff, L. C., 599
Magnarelli, L. A., 43, 562
Mahdi, A. A., 154
Mäkelä, O., 736
Mandine, E., 641
Manzi, S., 151
Mao, J. S., 621
Marco, F., 809
Markus, M. B., 366
Marling-Cason, M., 979
Marquette, C.-H., 364
Marshall, T. F. de C., 348
Martin, P. M. V., 324
Martins, R. R., 572
Marx, P. A., 757
Mason, E. O., Jr., 923
Massa, M. C., 148
Masur, H., 60
Mathewson, J. J., 1057
Matson, D. O., 71
Mattie, H., 281, 780
Mayer, L. F., 147
Maziere, B., 938
McAdam, K. P. W. J., 1025
McAllister, C. K., 503
McChesney, M. B., 757
McClain, J. B., 1073
McConnell, M. M., 582
McCracken, G. H. Jr., 508, 917
McCutchan, J. A., 822
McDermott, M. R., 460
McDougall, J. K., 123, 293
McFarlin, D. E., 741
McGraw, P. A., 103
McIntosh, K., 748
McKee, G., 576
McKee, M., 805
McKimmey, C., 777
McKinlay, M. A., 866
McKinney, R. M., 572
McLean, D. M., 155
McMurray, L. W., 103
McNeal, M. M., 79
Meiss, R. P., 232
Menniti-Ippolito, F., 1156
Menzies, R. I., 1007
Merigan, T. C., 390, 1115
Meyer zum Büschenfelde, K. H., 815
Meylan, P. R., 959
Miller, G. G., 116
Miller, K. D., 139
Miller, M., 168, 872
Miller, N. M., 131
Mincheva-Nilsson, L., 998
Miniter, P., 717
Minnich, L. L., 829
Minoshima, N., 808
Mirelman, D., 303
Mishaw, C., 1013
Miyazaki, C., 750
Mizokami, M., 808
Mobley, H. L. T., 488
Moffie, B. G., 595
Monack, D., 205
Monforte, R., 809
Monsur, K. A., 144
Montgomery, J., 348
Moore, J. O., 151
Moore, L., 596
Morck, D. W., 1065
Mordhorst, C., 1111
Morona, R., 145
Moroni, M., 977
Morrow, I. M., 984
Morte, S., 362
Morton, D., 1000
Moseley, S. L., 344, 400
Moss, A., 1029
Moulsdale, H., 1025
Mulder, G. D., 809
Müller, W. E. G., 815
Munoz, J. J., 205
Murphy, J. W., 116
Murphy, T. V., 908
Murphy, W. F., 599
Murray, H. W., 599
Musser, J., 908
Musser, J. M., 708
Mustafa, M. M., 917
Myers, L. L., 133
Myers, M. G., 89
Nachman, S., 16
Nahass, R. G., 811
Nahm, M. H., 908
Naigowit, P., 890
Naim, M., 154
Nakata, S., 71
Nakayama, M., 750
Navas, C., 725
Neill, M. A., 344
Neill, R. J., 344
Nelson, S., 189
Ness, M. J., 495
Neumann, B., 686
Newhall, W. J., V, 661
Newland, J. W., 344
Newman, F., 430
Nichols, R. L., 1088
Nickel, J. C., 1065
Nieman, R. E., 360
Nontasut, S., 274
Norgard, M. V., 508
Norton, H. J., 1013
Notkins, A. L., 974
Nozaki, T., 808
Numsuwan, V., 35
Nutman, T. B., 1151
Nybom, R., 1037
Obaid, K. A., 154
Obrador, C., 804
Ogasawara, M., 1142
Ogle, J. W., 748
Oh, S. H., 328
Okada, K., 750
Oksenhendler, G., 363
Okuzawa, E., 808
Olds, G. R., 798
Oldstone, M. B. A., 384, 757
Oliva, S. L., 1154
Olsen, K., 508
Olsen, K. D., 917
Olson, M. E., 1065
Olyhoek, T., 686
Opal, S. M., 1073
Ogra, P. L., 1018
Ørskov, I., 579
Ortona, L., 1156
Osterholm, M. T., 908
Ottaviani, M., 938
Paavonen, J. A., 293
Pagano, J. S., 248
Palla, M., 977
Palma, G., 725
Palmer, S., 1025
Pandey, J. P., 908
Pangon, B., 1005
Paoletti, E., 625
Parea, M., 335
Parker, C. J., 518
Parker, W. D., 748
Parrillo, J. E., 60
Passarani, N., 335
Pastecchia, C., 977
Patrick, G. S., 923
Patterson, T. F., 717
Patton, D. L., 1105
Peacock, M. G., 205
Pedrol, E., 598
Peetermans, W. E. C., 595
Penaranda, M., 71
Pentel, P., 480
Perfect, J., 151
Perkins, S., 436
Perkus, M. E., 625
Peters, B., 310
Petersen, L. R., 562
Peterson, L. R., 340
Peterson, M. L., 293
Peterson, P. K., 480
Peterson, W. L., 979
Phair, J. P., 320
Philippon, A., 1005
Phillips, P., 1147
Pichon, F., 1005
Pidcock, K. A., 526
Piland, T. H., 569
Pinckard, K., 1013
Pincus, S. H., 701
Pineda, E., 845
Pinkerton, R. E., 136

Pitakwatchara, N., 890
Plorde, J., 794
Plotkin, S. A., 851, 860, 1000
Pocidalo, J.-J., 938
Pokorny, S., 1013
Polk, R. E., 593
Pollack, M., 113, 168, 872
Pons, V. G., 1154
Ponzetto, A., 977
Poolman, J. T., 686
Porter, J. D., 680
Potter, M. E., 133, 774
Prachaktam, R., 274
Prieto, J., 362
Prince, R. A., 593
Pristerà, R., 1156
Pritchard, D. G., 1139
Rabin, L. B., 436
Rabin, M., 670
Radentz, W. H., 503
Radigan, G., 1147
Raffoul, H., 938
Rahal, J. J., 784
Rahman, M. A., 472
Rahman S., 144
Raj, P., 1061
Rakusan, T. A., 127
Rambeck, J. H., 908
Ramilo, O., 917
Rao, M. R., 770
Raoult, D., 1158, 1159
Rauch, K. J., 569
Ravdin, J. I., 420
Ray, C. G., 829
Reddy, M. M., 120
Redhead, K., 211
Redus, M., 562
Reed, S. L., 794
Regnier, B., 1005
Reichart, C. A., 900
Riedel, D. A., 603
Remington, J. S., 790
Remlinger, K., 148
Renneberg, J., 1128
Reyes, G. R., 436
Rezza, G., 1156
Richards, O. C., 155
Richman, D. D., 412, 822
Ries, T. M., 809
Riley, I., 348
Rinaldi, M. G., 503
Rinaldo, C. R., Jr., 472
Ringdén, O., 610
Rizzetto, M., 977
Roberts, J. M., 139
Roberts, P. L., 400
Robinson, W. S., 1115
Rodriquez, H., 766
Roger, P. M., 143
Ronald, A. R., 3
Rooney, J. F., 974
Ropka, S. L., 866
Rosenthal, K. L., 460
Rossol, S., 815
Rotbart, H. A., 761
Rowe, B., 582
Rowe, J., 436
Rowley, D., 145
Ruiz, J., 1160
Russell, J. Q., 670
Rutherford, G. W., 569
Ryan, J. L., 717
Sack, D. A., 770
Sadoff, J. C., 1073
Saiphan, P., 654
Sakazaki, R., 543
Salassa, B., 1156
Salles, M.-F., 641
Samsonoff, W. A., 805
Sánchez, P. J., 508
Sánchez-Porto, A., 804
Sane, A., 151
Sarasini, A., 335
Saravia, N. G., 725
Sathapatayavongs, B., 274
Sawyer, L. A., 562
Saxinger, C., 603
Sazawal, S., 1061
Schachter, J., 1105
Scheidegger, C., 1007
Schiff, G. M., 79
Schooley, R. T., 837
Schreuder, G. M. Th., 549
Schröder, H. C., 815
Schwarcz, S. K., 569
Schwartz, B., 680
Schwartzer, T. A., 35
Selander, R. K., 708, 908
Seppälä, I., 736
Serrano, M., 362
Seto, W.-H., 153
Settergren, B., 998
Shaffer, N., 596
Shands, J. W., Jr., 777
Sharp, B., 480
Shearman, D. J. C., 145
Sheetz, K., 908
Sheffler, L., 586
Sherman, L. A., 900
Sherwood, J. R., 79
Shigeoka, A. O., 701
Shlaes, D. M., 1095, 1132
Shlaes, J. H., 1095, 1132
Shoenut, J. P., 984
Shoop, D. S., 133
Shukla, R., 79
Siegal, F. P., 147
Silcox, V. A., 708
Silva, C. L., 787
Sim, I. S., 248, 430
Simberkoff, M. S., 784
Simpson, M., 480
Sinicco, A., 1156
Skinner, M., 1115
Skulberg, A., 195
Sloop, F. B., 594
Slutkin, G., 96
Smets, P., 641
Smith, C. C., 625
Smith, D., 348
Smith, J. W., 1088
Snyder, R. R., 1001
Soave, R., 1160
Soike, K. F., 331, 616
Solomon, D. A., 556
Solorzano-Santos, F., 1003
Sonnerborg, A., 1037
Sordelli, D. O., 232
Sørensen, E., 195
Spector, S. A., 822
Spicehandler, D., 784
Squires, K. E., 599
Sriphojanart, S., 274
Srivastava, R., 1061
Stamm, W. E., 400, 635, 794
Stapleton, A., 400
Starr, S. E., 860, 1000
Steele, L. C., 708
Steenman, G., 324
Steere, A. C., 136
Stephanopoulos, D. E., 89
Stevens, C. E., 293
Stolarsky, T., 303
Strannegard, O., 1037
Stratton, C. W., 103
Straube, R. G., 822
Stroh, E. M., 363
Stull, T. L., 526
Sturm, A. W., 931
Subiza, J. L., 219
Summer, W. R., 189
Summers, D. F., 155
Sun, M., 1018
Suzuki, Y., 790
Svanborg Edén, C., 579
Svennerholm, A.-M., 770
Swan, J. C., 60
Swiss-Dutch J5 Immunoglobulin Study Group, 802
Sydnor, A., Jr., 594
Syrogiannopoulos, G. A., 917
Szoka, F. C., Jr., 717
Takeuchi, T., 808
Tamura, K., 543
Tanaka, T., 71
Taniguchi, K., 753
Tarr, P. I., 344
Tartaglione, T., 593
Taylor, D. N., 543
Thomas, M. G., 211
Thomas, R. J., 562
Thompson, J., 595
Thompson, J., 780

Thompson, J. J., 189
Thompson, K., 148
Thomsen, D. R., 255
Thorpe, R., 1025
Threlkeld, N., 508
Threlkeld, S. C., 1050
Tierney, A., 467
Tirelli, U., 1156
Toivanen, A., 1142
Tokugawa, K., 750
Toltzis, P., 748
Tomasz, A., 16
Tomford, J. W., 352
Toossi, Z., 352
Torian, B. E., 794
Torseth, J., 1115
Tosswill, J., 1025
Totsuka, K., 281
Trairatvorakul, P., 274
Tsang, V. C. W., 50
Turck, M., 1, 377
Uchida, T., 1122
Uchiyama, T., 1122
Ueda, K., 750
Unicomb, L. E., 335
Upchurch, D. M., 900
Urbano-Márquez, A., 598
Valderrama, L., 725
Vallois, J.-M., 938
van den Ende, J., 131
van den Hoek, J. A. R., 1157
Van Der Pas, M. A., 616
van Furth, R., 780
van Griensven, G. J. P., 1157
van Oijen, P. L. M., 109
Vaughan, W. P., 495
Vene, S., 1111
Verastegui, H., 452
Vivoda, L. M., 1088
Vogelman, B., 281
Volberding, P. A., 1029
Voth, R., 815
Wachsman, M., 625
Wachsmuth, I. K., 774
Wade, J. C., 488
Wadell, G., 753
Wahren, B., 610
Waldmann, T. A., 741
Walker, B. D., 837
Walker, D. H., 1122
Walker, M. C., 79
Wall, R. A., 686
Wallace, R. J., Jr., 708
Wan, Z. J., 621
Wand, P. J., 572
Wang, S.-P., 1111
Wang, Y. Z., 621
Ward, R. L., 79
Warner, W. L., 569
Waskin, H. A., 360
Wasserheit, J. N., 900
Wathen, M. W., 255
Wattanagoon, Y., 654, 890
Weber, J. N., 1025
Webster, R. G., 1050
Weibel, R. E., 860
Weigle, K. A., 725
Weinstein, M. P., 811
Weller, T. H., 378
Wells, J. G., 133
Wendel, G. D., 508
Wenger, A., 989
Werdegar, D., 569
Wheeler, C. M., 265
Wheeler, P. W., 954
White, N. H., 1013
White, N. J., 139
White, N. J., 654, 890
Wilber, J., 1029
Wilchek, M., 303
Williamson, R., 1095, 1132
Wilson, A. K., 866
Wilson, C. S., 467
Wilson, L. A., 189
Wittenberg, D. F., 131
Wohlenberg, C., 974
Wolinsky, S., 320
Wood, C. A., 945
Woods, G. L., 495
Wu, M., 994
Wuthiekanun, V., 654
Xiao, S.-H., 589
Xie, R. Y., 621
Yamamoto, M., 808
Yamanishi, K., 750
Yang, K. D., 701
Yangco, B. G., 556
Young, E. C., 79
Young, L. S., 994
Yow, M. D., 156, 163, 1013
Yu, D. T. Y., 1142
Yu, X., 1122
Yuen, K.-Y., 153
Yung, W.-H., 153
Zack, L., 148
Zak, O., 26
Zalisz, R., 641
Zhang, H. Y., 621
Zhang, X. Y., 621
Zhang, Z.-X., 248
Zhaori, G., 1018
Zhou, T. J., 621
Zierdt, W. S., 1151

THE JOURNAL OF INFECTIOUS DISEASES • VOL. 159, NO. 6 • JUNE 1989
© 1989 by The University of Chicago. All rights reserved. 0022-1899/89/5906-0039$01.00

Subject Index

Acquired immunodeficiency syndrome (*see* AIDS)
Acyclovir, for herpes simplex virus type 2, 845
Adherence
  by HEp-2 cells in *E. coli* infection, 1057, 1061
  E. histolytica, mechanisms, 420
  B. burgdorferi, to mammalian cells, 805
Adult respiratory distress syndrome, complication of African trypanosomiasis, 360
AIDS
  and *C. jejuni* diarrhea, 143
  antibodies to HIV in semen of heterosexual men, 324
  cell-mediated immunity to HIV recombinant antigens, 120
  experimental drug therapy, public access, 412, 416
  HIV detection, HLA antigen contamination of Western blot slips, 357
  Kaposi's sarcoma, epidemiology in San Francisco, 569
  risk in iv drug abusers, 1156
  suppression of monocyte function in HIV infection, 480
  treatment of *M. avium* infection with ansamycin, clofazimine, ethambutol, isoniazid, 784
  treatment with
    azidothymidine, 1029
    zidovudine and ribavirin, 822
AIDS Commentary
  diagnosis of HIV, 320
  tuberculosis and HIV, 96
AIDS-related complex, treatment with rifabutin, 1115
Amantadine, resistance in influenza A virus, 430, 1050
Amdinocillin, for catheter-associated bacteriuria, 1065
Amebiasis, due to *E. histolytica*, treatment with nitroimidazole-conjugated silica particles, 303
Aminoglycoside-induced nephrotoxicity, prevention by polyaspartic acid, 945
Amphotericin B
  complexed with cholesterol-sulfate for delivery, 717
  induction of tumor necrosis factor in murine macrophages, 113
  treatment of invasive experimental aspergillosis, 717
Anaerobiospirillum succiniciproducens, septicemia, 153
Animal model, murine, enterovirus, 761
Ansamycin, combination therapy for *M. avium* infection in AIDS, 784
Antibiotic resistance
  to tetracycline and penicillin G, in *N. gonorrhoeae*, 900
  to cephamycin, in *K. pneumoniae*, 1005
  to penicillin, in pneumococci, 16
  to amantadine, in influenza A virus, 1050
  to vancomycin, in *E. faecium*, 1095, 1132
Antibiotics, comparative dose-effect relations in murine pneumonitis and thigh-infection models, 281
Antibody
  to group B streptococcus type III, 1139
  to *H. influenzae* type B polysaccharide, 1083
  to poliovirus proteins, 1018
Antibody-dependent cell-mediated cytotoxicity, and neutralization assays, in genital herpesvirus infection, 328
Antigenemia, in invasive aspergillosis, 1147
Antiinflammatory agents, for pneumococcal meningitis, 26
Antimicrobial agent therapy, role of clinical pharmacist, 593, 594
Antimicrobial agents, diffusion into cardiac vegetations, 938
Appendicitis, nonperforative, 1088
Arthritis, reactive, triggered by *Y. enterocolitica*, 1142
Aspergillosis
  invasive
    antigen detection, 1147
    in an immunosuppressed rabbit model, 717
  treatment with amphotericin B/cholesterol-sulfate, 717
Aspergillus fumigatus
  experimental infection, in a rabbit model, 1147
  infection, in immunosuppressed rabbits, 717
Augmentin, for endocarditis due to *S. aureus*, 989
Autoradiography, for evaluation of antibiotic diffusion into cardiac vegetations, 938
Azidothymidine
  and interferon, synergistic inhibition of EBV-induced lymphoproliferation, 248
  for HIV infection, effect on beta-2 microglobulin, 1029
  pharmacokinetics in AIDS, 745
Azithromycin, for *M. avium* complex, 994

Bacteremia
  after cutaneous surgery, 148
  association with percutaneous extraction of biliary tract stones, 984
  association with tympanostomy tube insertion, 594
  due to *P. aeruginosa*, treatment with ciprofloxacin and monoclonal antibodies, 1073
  gram-negative, treatment with netilmicin, 931
Bacteriuria
  bladder, in urinary tract infection, 226
  catheter-associated, treatment with amdinocillin, 1065
  in elderly women, molecular analysis of *E. coli* isolates, 526
Bacteroides fragilis, urinary tract infection, 226
Baculovirus, expression of RSV F glycoprotein, 255
Benzylpenicillin, and tissue-type plasminogen activator, treatment for *S. sanguis* endocarditis, 780
Beta-lactamase,
  hydrolysis of cephalosporins to generate substrate profiles, 103
  production in *S. aureus*, 103
Biliary tract stones, bacteremia, association with percutaneous extraction, 984
Bone marrow transplantation, recipients, vaccination with a live attenuated measles, mumps, and rubella vaccine, 610
Bordetella pertussis
  antibody response to infection and vaccination, 211
  pathogenesis and pertussis toxin expression, 205
Borrelia burgdorferi
  attachment to mammalian cells, 805
  identification by ELISA, 43
  inflammatory response, in rabbits, 265
Borrelia species, infection, in iv drug abusers, 804
Bronchoscopes, mycobacterial contamination, 954
Brucella melitensis, IgG and IgM antibody levels, 219
Brucellosis, IgM and IgG antibody levels, 219

Calcivirus, diarrhea, in day care centers, 71
Campylobacter cinaedi and *C. fennilliae* antigens, characterization, 635
Campylobacter jejuni, diarrhea, in HIV infection, 143

Campylobacter pylori, antigenicity of outer membrane proteins, 586
Candida
antigen latex test for detection of invasive candidiasis, 495
nosocomial infection in the immunocompromised host, 488
Candida albicans, urinary tract infection, 226
Candidiasis
disseminated, in an iv drug abuser, 1007
fluconazole therapy in HIV infection, 806
in the immunocompromised host, 488, 495
nosocomial, use of DNA probe in analysis, 488
Carbamazepine, meningitis as adverse reaction, 363
Cardiac infection, due to mycobacteria, following bypass surgery, 708
Catheters, venous, transplant and dry gauze dressings, 310
CD4, recombinant, synergism with zidovudine against HIV-1, 837
Ceftriaxone, treatment for vertebral osteomyelitis due to *H. aphrophilus*, 811
Central nervous system, infection due to poliovirus, treatment with disoxaril, 866
Centrifugation shell vial assay, for isolation of *R. conorii*, 1158
Cephamycin, resistance in *K. pneumoniae*, 1005
Cerebrospinal fluid, proteins, in meningitis, 26
Chlamydia pneumoniae, TWAR, epidemics, 1111
Chlamydia trachomatis
experimental salpingitis, in mice, 1095
infection, recurrent, association with gonorrhea, 661
Cholera, association with ABO blood groups, 770
Chronic fatigue syndrome, IL-1 production, 362
Ciprofloxacin, for bacteremia due to *P. aeruginosa*, 1073
Clofazimine, combination therapy for *M. avium* infection in AIDS, 784
Clostridium difficile
diarrhea, 340
pseudomembranous colitis, 1154, 1155
Colitis, pseudomembranous, antibiotic-associated, 1154, 1155
Colonization factors, prevalence in enterotoxigenic *E. coli*, 582
Condyloma acuminata, genital tract infection in pregnancy, laser vaporization, 1001
Corynebacterium diptheriae, molecular epidemiology, 670
Coxiella burnetti, osteoarticular infection, 1159
Cryptococcus neoformans, T cell response to soluble antigen preparation, 116
Cryptosporidiosis, in children, 1160
Cryptosporidium
diarrhea in infants, 131
infection in Mexican children, 1160
Cysticercosis, diagnosis by enzyme-linked immunoelectrotransfer blot assay, 50
Cytomegalovirus
antibody prevalence, 1013
congenital, 163
human, antibody response to, 851
inhibition of hemopoietic colony formation, 127
live attenuated human vaccine, 860
monoclonal antibodies, 436
restriction enzyme fragment analysis of multiple strains in homosexual men, 123
risk factors, 1013
Dexamethasone, high-dose, for malaria, 803
Diarrhea
chronic, in humans, rabbit model, 133
due to calcivirus, in day care centers, 71
due to *C. jejuni*, in HIV infection, 143
due to *C. difficile*, recurrences, 340
due to *Cryptosporidium*, in infants, 131
due to enterotoxigenic *E. coli*, 144
due to *I. belli*, 596
due to rotavirus, protection by attenuated bovine rotavirus vaccine, 452
due to *S. dysenteriae*, 1, 881
due to *S. flexneri*, *S. dysenteriae*, *S. sonnei*, 1126
endemic, in Thai children, 543
Dillon, Hugh Crawford, Jr., tribute, J1
Diphtheria, outbreak in Seattle, 1972–1982, 670
Disoxaril, for central nervous system infection due to poliovirus, 866
DNA probe
for detection of *M. leprae*, 7
for evaluation of outbreaks of nosocomial candidiasis, 488

Editorial, cytomegalovirus, congenital, 163
Ehrlichiosis
human, in Oklahoma, 576
outbreak in army reservists, 562
ELISA
and solid-phase immune electron microscopy, for typing rotavirus, 335
capture technique, detection of serum IgM and IgG in mumps infection, 998
for diagnosis and follow-up in brucellosis, 219
for diagnosis of Lyme disease, by identification of *B. burgdorferi*, 43
Encephalitis, during chronic infection with *T. gondii*, 790
Endocarditis
due to *S. suis* type 2, 595
due to *S. aureus*, treatment with augmentin, 989
experimental, autoradiographic evaluation of antibiotic diffusion, 938
Endotoxin
plasma
as predictor of sequelae in systemic meningococcal disease, 195
elevation in neutropenia, 777
specificity and cross-reactivity of monoclonal antibodies with, 168
Entamoeba histolytica
amebiasis, treatment with nitroimidazole-conjugated silica particles, 303
luminal infection, 303
trophozoite attachment, mediated by adherence lectin, 420
serology, surface antigen, 794
seropositivity for, in Japanese homosexual men, 808
Enterococcus faecium
resistance to vancomycin, 1095, 1132
response to glycopeptides of vancomycin-resistant strain, 1132
Enteropathogenic bacteria, gastric bactericidal barrier to, in humans, 979
Enterovirus, barrier to transplacental passage, in mice, 761

Enzyme-linked immunoelectrotransfer blot assay and glycoprotein antigens for diagnosis of human cysticercosis, 50
Epidemiology
calcivirus diarrhea, in day care centers, 71
Chlamydia pneumoniae, epidemics in Scandinavia, 1981–1983, 1111
Cryptosporidium, in Central Mexico, 1160
diarrhea, calcivirus-associated, in day care centers, 71
diarrheagenic *E. coli* infection in India, 1061
diphtheria outbreak, in Seattle, 670
ehrlichiosis, outbreak in army reservists, 562
group B streptococcal infections in pregnant Mexican women, 1003
HTLV-1 infection in Papua New Guinea, 1025
Kaposi's sarcoma, AIDS-related, in San Francisco, 569
listeriosis, outbreak, 680
meningitis, epidemic in The Gambia, West Africa, due to *N. meningitidis*, 686
nosocomial infections, due to mycobacteria, 954
pneumonia, pediatric, in Papua New Guinea, 348
rheumatic fever, in the United States in the mid-1980s, streptococcal serotypes, 101
R. conorrii, in Spain, 1158
septicemia, due to *P. pseudomallei*, in northeastern Thailand, 890
spotted fever group rickettsiae, in Japan, 1122
transmission of human T lymphotropic virus type I in Barbados, 603
trimethoprim, resistance of *S. sonnei* in Bulgaria, 648
Epstein-Barr virus
enhanced antibody response in HIV-infected homosexual men, 472
lymphocyte transformation, inhibition by azidothymidine and interferon, 248
Erratum, McHugh et al., J Infect Dis 1988;158:1088–1091, 602
Erythromycin, and roxithromycin modulate neutrophil function, 966
Escherichia coli
diarrheagenic, adherence by HEp-2 cells, 1057, 1061
DNA polymorphisms, isolated from bacteriuric women, 526
enterotoxigenic
colonization factors CFA/III and PCFO159:H4, 582
multiple infections, 144
experimental
pyelonephritis, in rats, 959
septicemia, 641
K1, immunologic effect of human IgG in serum of neonatal rats, 581
O111:B4(J5), murine monoclonal antibodies to, 641
O157:H7, genotypic variation, 344
O111:B4(J5), immunochemical specificity of antibodies to LPS, 35
opsonization by immune globulin, 701
type 1 pili, activation of human neutrophils, 533
urinary tract infection, 226
uropathogenic, severity of infection and renal scarring, 579
Exanthem subitum, due to human herpesvirus-6, 750

Flavobacterium meningosepticum, cutaneous infection, 150
Fluconazole, for candidiasis in HIV infection, 806
Fungal arteritis, *Pythium* infection, in humans, 274

Gardnerella vaginalis, urinary tract infection, 226
Gastric bactericidal barrier, and human enteropathogens, 979
Genital infection
cervicovaginal, due to group B streptococci, 1003
condyloma acuminata, treament with laser vaporization, 1001
Gonorrhea, association with chlamydial infection, 661
Gram-negative septic shock, 802
Group A streptococci
M-serotypes associated with rheumatic fever, 101
opsonization by immune globulin, 701
Group B streptococci
genital infection in pregnant Mexican women, 1003
opsonization by immune globulin, 701
seroepidemiology of colonization, 1139

Haemophilus aphrophilus, vertebral osteomyelitis, treatment with ceftriaxone, 811
Haemophilus influenzae
antibody to, 1083
differential susceptibility to bactericidal activity, 1135
meningitis, development of labyrnthitis, 923
Haemophilus influenzae type b,
meningitis, induction by outer membrane vesicles, 917
polysaccharide vaccine, 908
Helminth, gastrointestinal infection, treatment with ivermectin, 1151
HEp-2 cell assay, for *E. coli*, 1057, 1061
Hepatic fibrosis, due to *S. japonicum*, 798
Hepatitis A
live attenuated vaccine, trial in humans, 621
strain designation, 155
Hepatitis D, in acute hepatitis B surface antigen-negative hepatitis, 977
Hepatitis, non-A, non-B, identification of virus-associated antigen, 1042
Herpes simplex virus
antibody response in genital infection, 328
infection in neonatal mice, 239
Herpes simplex virus type 1
glycoprotein D, regulation of expression, 625
vaccine, efficacy of intranasal route in mice, 974
Herpes simplex virus type 2
genital infection in male guinea pigs, 89
T lymphocytes from genital lymph nodes protect mice against intravaginal infection, 460
treatment of genital infections with acyclovir, 845
Human immunodeficiency virus
antibodies in semen of heterosexual men, 324
and *C. jejuni* diarrhea, 143
and tuberculosis, 96
association with Epstein-Barr virus in homosexual men, 472
cell-mediated immunity, 120
detection
in cerebrospinal fluid by using immune scanning electron microscopy, 1037
of RNA by in situ hybridization, 467
HLA antigen contamination of Western blot slips in detection, 357
p24 antigen levels as virologic marker in clinical trials, 822
RNA in lamina propria of patients with AIDS and gastrointestinal disease, 467

treatment, in 1988, 390
type 1, antiviral synergism of recombinant soluble CD4 and zidovudine, 837
HIV infection
and interferon production, 815
association with group-specific component protein, 147
effect of azidothymidine, on beta-2 microglobulin, 1029
incidence and surrogate markers among homosexual men, 1157
treatment of candidiasis with fluconazole, 806
HLA, association with tuberculosis and epitope-specific antibody levels, 549
Human herpesvirus-6, causative agent of exanthem subitum, 750
Human T lymphotropic virus type 1
proviral integration in tropical spastic paraparesis, 741
seroepidemiology in Papua New Guinea, 1025
seropositivity, FTA-ABS positivity as a predicator, 603
transmission in Barbados, 603
Hypoglycemia, in severe African trypanosomiasis, 360

IgA
antibodies in spondylarthropathy, correlation with *Y. enterocolitica*, 109
antibody levels in semen of heterosexual men, 324
response to LPS antibodies, 1142
IgG
antibody levels
in semen of heterosexual men, 324
in brucellosis, 219
antibody to *E. coli* J5, 802
human, immunologic effect in neonatal rat serum on *E. coli* K1, 518
response to
mumps infection, 998
varicella-zoster virus p32/p36 complex after infection and vaccination, 444
outer membrane proteins of *C. pylori* in pediatric patients, 586
serologic diagnosis of toxoplasmosis, 736
IgM
antibody levels in brucellosis, 219
fetal response to *T. pallidum* antigens, 508
response to
mumps infection, 998
varicella-zoster virus p32/p36 complex after infection and vaccination, 444
Immune scanning electron microscopy, for detection of HIV, 1037
Immunoglobulin, virus-induced immunosuppression during measles infection in rhesus monkeys, 757
Infectious Diseases Society of America
antimicrobial agents, clinical trials, 3
John F. Enders Memorial Lecture, 378
Twenty-seventh annual meeting, 1163
Uniform Acceptance Date of Postdoctoral Trainees in Infectious Diseases, 367
Influenza A virus
resistance to amantadine, 1050
resistance to amantadine and rimantadine, 430
genetic characterization of drug resistance, 430
Influenza, immunization of high-risk patients, 364, 365
Influenza virus, myocarditis, 829

Interferon
and azidothymidine, synergistic inhibition of EBV-induced lymphoproliferation, 248
production in HIV infection, 815
Interferon-beta, treatment of simian varicella virus with liposomal formulations, 616
Interferon-gamma
and *M. avium-intracellulare* infection, 599
protection induced by interleukin-2, in HSV-infected neonatal mice, 239
Interleukin-1, in chronic fatigue syndrome, 362
Interleukin-2
suppression of production by T cells, 352
treatment of herpes simplex virus infection in neonatal mice, 239
Intravenous drug abuse
and disseminated candidiasis, 1007
association of HIV infection and group-specific component protein, 147
Isoniazid, combination therapy for *M. avium* infection in AIDS, 784
Isospora belli, chronic travelers' diarrhea, 596
Ivermectin, for gastrointestinal helminthiasis, 1151
Ixodes dammini
antibody response in rabbits to salivary gland and midgut components, 265
detection of spirochetal components involved in antigen production, 265
inflammation of skin in rabbits, 265

Kaposi's sarcoma, AIDS-related, epidemiology, 569
Klebsiella pneumoniae
cephamycin resistant, porin-deficient mutant, 1005
experimental pneumonitis and thigh infection, comparative antibiotic dose-effect relations, 281
opsonization by immune globulin, 701
urinary tract infection, 226

Labyrinthitis, due to *H. influenzae* type b meningitis, 923
Laparoscopy, for diagnosis of peritoneal tuberculosis, 1007
Laser vaporization, for genital tract condyloma acuminata in pregnancy, 1001
Legionella pneumophila
community acquired legionnaires's disease, 572
multiple organ involvement, 807
Legionnaire's disease
community-acquired, association with a cooling tower, 572
multiple organ involvement, 809
Leishmania braziliensis, subspecies relationship to disease expression, 725
Leishmaniasis, human tegumentary, immunopathogenic mechanism, 725
Leprosy
diagnosis by DNA probe, 7
tumor necrosis factor, 787
Leukocyte, response to chlamydial infection, 1095
Lipooligosaccharide
H. influenzae type b, 917
kinetics of clearance in meningococcemia, 195
Lipopolysaccharide
E. coli, antibodies to, 35, 168
IgA antibodies to, in reactive arthritis, 1142

reactive monoclonal antibodies and tumor necrosis factor production, 872
S. minnesota, antibodies to, 168
sequestration of neutrophils in pulmonary vasculature, 189
Listeria monocytogenes
infections of prosthetic joints, 156
etiology of epidemic infections, 680
Listeriosis, outbreak, 680
Lyme disease
clinical confusion with ehrlichiosis, 562
diagnosis by ELISA, 43
penicillin prophylaxis for *I. dammini* tick bites, 136
Lymphocytes, interaction with monocytes in IL-2 production in tuberculosis, 352

Malaria
cerebral, due to *P. knowlesi*, in a rhesus monkey model, 154
due to *P. falciparum*, skeletal muscle damage in African children, 139
treatment with high-dose dexamethasone, 803
Measles, suppression of immunoglobulin synthesis in rhesus monkeys, 757
Melioidosis
parotitis in children, 654
septicemia, 890
Meningitis
aseptic, associated with carbamazepine, 363
due to *H. influenzae* type b, 917, 923
due to *S. pneumoniae*, altered CSF proteins, 26
due to *N. meningitidis*, 195, 686
Methadone, suppression of human monocyte function, 480
Metronidazole, ineffective for antibiotic-associated pseudomembranous colitis, 1154, 1155
Monoclonal antibodies
human, to human cytomegalovirus, 436
murine, against *E. coli* O111:B4(J5), 641
reactive with LPS, role in inhibition of tumor necrosis factor, 872
reactivity with LPS in *E. coli* and *S. minnesota*, 168
to *P. carinii*, rat and human isolates of, 60
to LPS, for bacteremia due to *P. aeruginosa*, 1073
Monocyte, function, suppression by methadone and morphine, 480
Morphine, suppression of human monocyte function, 480
Mumps, infection in guinea pigs, serologic diagnosis by ELISA, 998
Mycobacteria, nosocomial infection, due to contamination of bronchoscopes, 954
Mycobacterium avium
chronic infection, hamster model, 556
effect of interferon-gamma, 599
in AIDS, treatment with ansamycin, clofazimine, ethambutol, isoniazid, 784
treatment with azithromycin, in mice, 994
Mycobacterium, infection, following cardiac bypass surgery, 708
Mycobacterium leprae, DNA probe, species-specific, 7
Mycoplasma hominus, urinary tract infection, 226
Mycoplasma tuberculosis, epitope-specific antibody levels and HLA, 549
Myeloperoxidase, a marker for kidney neutrophil infiltration, 959
Myocarditis, due to influenza virus, treatment with ribavirin, 829

Neisseria gonorrhea
infection, reactivation of chlamydial infection in, 661
antibiotic resistance, 900
Neisseria meningitidis
endotoxemia, multiple organ failure and death, 195
epidemic in The Gambia, West Africa, 686
isolates, clonal analysis, 686
Nephrotoxicity, due to aminoglycosides, prevention by polyaspartic acid, 945
Netilmicin, for gram-negative bacteremia, 931
Neutropenia, lack of correlation of fever and plasma endotoxin, 777
Neutrophil
chemotaxis, due to complement-derived factors and bacterial formylpeptides, 959
in vivo migration in acute pyelonephritis, 959
migration, enhancement by erythromycin and roxithromycin, 966
human, oxidative activation of *E. coli*, 533
Nitroimidazoles, drug delivery, conjugation to silica particles, 303
Nosocomial infection, due to *Candida*, in the immunocompromised host, 488

Opsonization, mechanisms in bacteria, by immune globulin, 701
Osteoarticular infection, due to *C. burnetti*, 1159
Osteomyelitis, vertebral, due to *H. aphrophilus*, treatment with ceftriaxone, 811

Papillomavirus
age-specific prevalence of infection, 293
diagnosis of cervical infection, 293
human, detection and typing, 293
Parotitis, acute, due to *P. pseudomallei*, 654
Pefloxacine, for purulent pericarditis due to *Y. enterocolitica*, 363
Penicillin G, resistance of *N. gonorrhea*, 900
Penicillin
isoxazolyl, for *S. aureus* infection, 1128
prophylaxis for *I. dammini* bites, 136
resistance, clonal nature, in pneumococci, 16
Pericarditis, due to *Y. enterocolitica*, treatment with pefloxacine, 363
Perspective, HEp-2 cell adherence in diarrheagenic *E. coli*, 1057
Pertussis toxin
expression, correlates with pathogenesis in *Bordetella*, 205
human serum antibody response to subunits, 211
Phaeohyphomycosis, cutaneous, in a cardiac transplant patient, 503
Phythiosis, thalassemia hemoglobinopathy syndrome, in humans, 274
Pili, *E. coli* type 1, potentiation of neutrophil oxidative activity, 533
Piroxicam, for pneumonia due to *P. aeruginosa*, 232
Plasmodium falciparum, malaria, skeletal muscle injury in African children, 139
Plasmodium knowlesi, cerebral malaria in a rhesus monkey model, 154
Pleurophoma pleurospora, pathogenicity in the immunocompromised host, 503
Pneumonitis, experimental, due to *K. pneumoniae*, comparative antibiotic dose-effect relations, 281
Pneumococci, penicillin resistance, clonal nature, 16

Pneumocystis carinii
antigenic differences between rat and human isolates, 60
nomenclature, 366
Pneumonia
due to *P. aeruginosa*, 232
pediatric, in Papua New Guinea, 348
Poliovirus
antibody response to type 3 virion proteins, 1018
persistent infection of central nervous system, in mice, treatment with disoxaril, 866
Polyaspartic acid, prevention of aminoglycoside nephrotoxicity, 945
Praziquantel, differences between enantiomorphs, in *Schistosoma mansoni*–infected mice, 589
Pregnancy, genital infection in, due to group B streptococci, 1003
Prepublication, release of scientific data, 407
Proteus mirabilis, urinary tract infection, 226
Pseudomonas aeruginosa
bacteremia, treatment with ciprofloxacin and monoclonal antibodies, 1073
pulmonary damage in mice, 232
Pseudomonas pseudomallei
septicemia, 890
parotitis, in children, 654
Pyelonephritis, experimental, due to *E. coli*, 959
Pythium infection, in farmers, 274

Respiratory syncytial virus, immunization of rats with RSV F glycoprotein, 255
Restriction enzyme fragment analysis
in *E. coli* urinary isolates, 526
in multiple strains of CMV in homosexual men, 123
Rheumatic fever, group A streptococci associated with, 101
Ribavirin
for AIDS, 822
for influenza virus-associated myocarditis, 829
oral therapy for subacute sclerosing panencephalitis, 748
Rickettsia conorii, isolation using centrifugation shell vial assay, 1158
Rickettsia, spotted fever group, 1122
Rifabutin, for AIDS-related complex, 1115
Rimantadine, resistance of influenza A virus, 430
Rocky Mountain spotted fever, clinical confusion with ehrlichiosis, 562
Rotavirus
antibodies, in humans, probability of infection and illness, 79
efficacy of rhesus vaccine against, 753
human, typing by solid-phase immune electron microscopy and ELISA, 335
vaccine, protection against diarrhea in Peruvian children, 452
Roxithromycin and erythromycin modulate neutrophil function, 966

Salmonella typhi, live oral vaccine, 766
Salpingitis, experimental, due to *C. trachomatis*, in mice, 315
Schistosoma japonicum, immunoregulation of hepatic fibrosis in, 798
Schistosoma mansoni, treatment of infected mice with enantiomorph of praziquantel, 589
Septicemia, *A. succiniciproducens*, 153
Shiga toxin, binding kinetics, 881
Shiga-like toxin
continuous infusion as a disease model, 774
E. coli, O157:H7, 344
Shigella dysenteria
infective dose, 1126
Shiga toxin receptors on HeLa cells, 881
Shigella flexneri, infective dose, 1126
Shigella sonnei
infective dose, 1126
resistance to trimethoprim, 648
Simian varicella virus
antivirial efficacy of liposomal formulations, in a primate model, 616
treatment with liposomal formulations of recombinant human interferon beta, 616
enhancement by recombinant human tumor necrosis factor alpha, 331
Spiramycin, lack of efficacy in infants with *Cryptosporidium* diarrhea, 131
Spondylarthropathy, seronegative, specific IgA in, correlation with *Y. enterocolitica*, 109
Staphylococcus aureus
differentiation of beta-lactamase variants, 103
endocarditis, treatment with augmentin, in methicillin-resistant strains, 989
infection, treatment with isoxazolyl penicillins, 1128
urinary tract infection, 226
Staphylococcus epidermidis
opsonization by immune globulin, 701
urinary tract infection, 226
Staphylococcus saprophyticus, urinary tract infection, 226
Streptococcus agalactiae, urinary tract infection, 226
Streptococcus faecalis, urinary tract infection, 226
Streptococcus faecium, urinary tract infection, 226
Streptococcus mitis, urinary tract infection, 226
Streptococcus pneumoniae, meningitis, treatment with ampicillin and antiinflammatory agents, 26
Streptococcus sanguis, experimental endocarditis, treatment, 780
Subacute sclerosing panencephalitis, treatment with rivaribin, 748
Surgical infections, due to mycobacteria, 708
Syphilis, congenital, serodiagnosis, 508

T lymphocytes
immunity against HSV-2 in murine genital tract infection, 460
polyclonality in tropical spastic paraparesis, 741
response to
cryptococcal infection, 116
recombinant vaccinia virus challenge, 1119
Taenia solium, diagnosis of cysticercosis, in humans, 50
Tetracycline, resistance in *N. gonorrhea*, 900
Thalassemia hemoglobinopathy syndrome, pythiosis, association with, in humans, 274
Tissue-type plasminogen activator, 780
Toxoplasma gondii
encephalitis, 790
primary infection, diagnosis by IgG avidity, 736
Toxoplasmosis, diagnosis by IgG avidity, 736
Treponema pallidum, serodiagnosis of congenital syphilis, 508
Tribute, Hugh Crawford Dillon, Jr., 1011
Trimethoprim, resistance in *S. sonnei*, 648
Tropical spastic paraparesis, molecular analysis of T cells, 741

Trypanosomiasis, spurious hypoglycemia, 360
Tuberculosis
  and HIV infection, 96
  HLA association and antibody levels, 549
  role of CD16-positive lymphocytes in T cell generation of IL-2, 352
  tonsillar and pharyngeal, in a HIV-seronegative patient, 598
  peritoneal, laparoscopy for diagnosis, 1007
Tumor necrosis factor
  induction by LPS, 189, 872
  in leprosy, 787
  enhancement of simian varicella virus, 331
  pulmonary inflammatory response, 189
  production by murine macrophages, amphotericin B-induced, 113
Typhoid fever, live oral vaccine, field trial of enteric-coated capsules, 766
Typhoid/cholera vaccine, hybrid, antibody response to *S. typhi* and *V. cholerae* O-antigens, 145

Ureaplasma urealyticum, urinary tract infection, 226
Urinary tract infection
  bacteriuria in bladder, 226
  catheter-associated, treatment with amdinocillin, 1065
  E. coli adherence and renal scarring, 579
  single-dose therapy, 400
  pathogenesis and treatment, 400

Vaccination
  against hepatitis A, 621
  against HSV-2, use of vaccinia recombinants, 625
  against measles, mumps, and rubella in bone marrow transplant recipients, 610
  against typhoid, 766
Vaccine
  cholera, efficacy and relation to ABO blood groups, 770
  H. influenzae type b, 908, 1083
  herpes simplex virus, in mice, 974
  human cytomegalovirus, 851, 860
  polio, 1018
  rhesus rotavirus, efficacy in Swedish children, 753
Vaccinia viruses, recombinant, as a challenge to influenza-immune mice, 1119
Vancomycin
  ineffective for antibiotic-associated pseudomembranous colitis, 1154, 1155
  resistance in *E. faecium*, 1095, 1132
Varicella-zoster virus
  antibodies to glycoprotein, 358
  detection by Western blot analysis, 358
  p32/p36 complex, humoral immune response after infection and vaccination, 444
Vibrio cholerae
  efficacy of cholera vaccine, 770
  non-O:1 infection via lake water, 809
Viral disease, molecular basis, 384

Western blot
  detection of antibody to varicella-zoster virus, 358
  slips, contamination with HLA antigen, 357

Yersinia enterocolitica
  in intestinal biopsy specimens, correlation with specific IgA, 109
  pericarditis, treatment with pefloxacine, 363
  reactive arthritis, IgA antibody levels, 1142

Zidovudine
  for AIDS, 822
  synergism with recombinant soluble CD4 against HIV-1, 873
Zoster, infection in children following varicella vaccination, 1000

The Journal of Infectious Diseases

Volume 159 • *January 1989* • *Number 1*

CONTENTS

A Nonsectarian Sermon from the Editor — Marvin Turck — 1

From the Infectious Diseases Society of America

Clinical Trials of Antimicrobial Agents Following Licensure — Allan R. Ronald — 3

Original Articles

A Species-Specific Repetitive Sequence in *Mycobacterium leprae* DNA — Josephine E. Clark-Curtiss and Martin A. Docherty — 7

Penicillin-Binding Protein Families: Evidence for the Clonal Nature of Penicillin Resistance in Clinical Isolates of Pneumococci — Daniela Jabes, Sharon Nachman, and Alexander Tomasz — 16

Cerebrospinal Fluid Protein Profile in Experimental Pneumococcal Meningitis and Its Alteration by Ampicillin and Anti-Inflammatory Agents — Jagath L. Kadurugamuwa, Bruno Hengstler, and Oto Zak — 26

Immunochemical Specificity of Human Antibodies to Lipopolysaccharide from the J5 Rough Mutant of *Escherichia coli* O111:B4 — T. A. Schwartzer, D. V. Alcid, V. Numsuwan, and D. J. Gocke — 35

Enzyme-Linked Immunosorbent Assays for Lyme Disease: Reactivity of Subunits of *Borrelia burgdorferi* — Louis A. Magnarelli, John F. Anderson, and Alan G. Barbour — 43

An Enzyme-Linked Immunoelectrotransfer Blot Assay and Glycoprotein Antigens for Diagnosing Human Cysticercosis (*Taenia solium*) — Victor C. W. Tsang, Joy A. Brand, and Anne E. Boyer — 50

Monoclonal Antibodies to *Pneumocystis carinii:* Identification of Specific Antigens and Characterization of Antigenic Differences Between Rat and Human Isolates — Joseph A. Kovacs, Jane L. Halpern, Bettina Lundgren, Judith C. Swan, Joseph E. Parrillo, and Henry Masur — 60

Human Calicivirus–Associated Diarrhea in Children Attending Day Care Centers — David O. Matson, Mary K. Estes, Roger I. Glass, Alfred V. Bartlett, Maria Penaranda, Ed Calomeni, Tomoyuki Tanaka, Shuji Nakata, and Shunzo Chiba — 71

Effects of Antibody to Rotavirus on Protection of Adults Challenged with a Human Rotavirus — Richard L. Ward, David I. Bernstein, Rakesh Shukla, Elizabeth C. Young, James R. Sherwood, Monica M. McNeal, M. Catherine Walker, and Gilbert M. Schiff — 79

Genital Infections Due to Herpes Simplex Virus Type 2 in Male Guinea Pigs — Dimitrios E. Stephanopoulos, Martin G. Myers, and David I. Bernstein — 89

AIDS Commentary

Tuberculosis and Human Immunodeficiency Virus Infection — Richard E. Chaisson and Gary Slutkin — 96

Concise Clinical and Laboratory Communications

Group A Streptococcal Serotypes Isolated from Patients and Sibling Contacts During the Resurgence of Rheumatic Fever in the United States in the Mid-1980s — Edward L. Kaplan, Dwight R. Johnson, and P. Patrick Cleary — 101

Differentiation of β-Lactamase Variants of *Staphylococcus aureus* by Substrate Hydrolysis Profiles — Douglas S. Kernodle, Charles W. Stratton, Lesia W. McMurray, John R. Chipley, and Patricia A. McGraw — 103

Yersinia in Intestinal Biopsy Specimens from Patients with Seronegative Spondyloarthropathy: Correlation with Specific Serum IgA Antibodies — J. de Koning, J. Heesemann, J. A. A. Hoogkamp-Korstanje, J. J. M. Festen, P. M. Houtman, and P. L. M. van Oijen — 109

Amphotericin B Induces Tumor Necrosis Factor Production by Murine Macrophages — John K. S. Chia and Matthew Pollack — 113

T Cell Response to Soluble Cryptococcal Antigens After Recovery From Cryptococcal Infection — Jennifer F. Hoy, Juneann W. Murphy, and Geraldine G. Miller — 116

Cell-Mediated Immunity to Recombinant Human Immunodeficiency Virus (HIV) Antigens in HIV-Infected Populations — Mohan M. Reddy and Michael H. Grieco — 120

Identification of Multiple Strains of Cytomegalovirus in Homosexual Men — Ann C. Collier, Susan H. Chandler, H. Hunter Handsfield, Lawrence Corey, and James K. McDougall — 123

Inhibition of Hemopoietic Colony Formation by Human Cytomegalovirus in Vitro — Tamara A. Rakusan, Harinder S. Juneja, and W. Robert Fleischmann, Jr. — 127

Spiramycin Is Not Effective in Treating Cryptosporidium Diarrhea in Infants: Results of a Double-Blind Randomized Trial — D. F. Wittenberg, N. M. Miller, and J. van den Ende — 131

Enteric Disease in Rabbits Inoculated with Stool Filtrates from Persons with Chronic Diarrhea — Lyle L. Myers, Douglas S. Shoop, Morris E. Potter, and Joy G. Wells — 133

A Prospective Study of Tick Bites in an Endemic Area for Lyme Disease — Celine M. Costello, Allen C. Steere, Ronald E. Pinkerton, and Henry M. Feder, Jr. — 136

Biochemical Evidence of Muscle Injury in African Children with Severe Malaria — Kirk D. Miller, Nicholas J. White, John A. Lott, Jacquelin M. Roberts, and Brian M. Greenwood — 139

Correspondence

Diarrhea and *Campylobacter* Infections in Patients Infected with the Human Immunodeficiency Virus — E. Bernard, P. M. Roger, D. Carles, V. Bonaldi, J. P. Fournier, and P. Dellamonica — 143

Evidence of Multiple Infections in Cases of Diarrhea Due to Enterotoxigenic *Escherichia coli* — Kazi A. Monsur, Yasmin A. Begum, Zia U. Ahmed, and Sadequr Rahman — 144

Immunogenicity of a Candidate Live Oral Typhoid/Cholera Hybrid Vaccine in Humans	Bruce D. Forrest, Justin T. LaBrooy, Stephen R. Attridge, Garth Boehm, Les Beyer, Renato Morona, David J. C. Shearman, and Derrick Rowley	145
Genotypes of the Group-Specific Component Protein in Black Intravenous Drug Abusers	Beth Levine, Ira Leiderman, Frederick P. Siegal, Lloyd F. Mayer, and Charlotte Cunningham-Rundles	147
The Incidence of Bacteremia After Skin Surgery	Lisa Zack, Kathleen Remlinger, Ken Thompson, and Mary C. Massa	148
Cutaneous Infection Caused by *Flavobacterium meningosepticum*	Ricardo Bolivar and William Abramovits	150
Deferoxamine Treatment as a Risk Factor for Zygomycete Infection	Aneysa Sane, Susan Manzi, John Perfect, Arlene J. Herzberg, and Joseph O. Moore	151
A Case Report of *Anaerobiospirillum* Causing Septicemia	Kwok-Yung Yuen, Wai-Hung Yung, and Wing-Hong Seto	153
A Histopathologic Study of Cerebral Malaria in a Rhesus Monkey Model	Abbas Ali Mahdi, Sohail Ahmad, Haris M. Khan, Raka Khanna, Khalil Abid Obaid, Hemant Kumar, Nazoora Khan, and Mohammad Naim	154
Designation of a Test Strain of Hepatitis A Virus	Donald M. McLean	155
Reply	Jeffrey M. Johnston, Shirley A. Harmon, Leonard N. Binn, Oliver C. Richards, Ellie Ehrenfeld, and Donald F. Summers	155
Listeria monocytogenes Infections of Prosthetic Joints	Sandra M. Abadie	156
Reply	Martha D. Yow	156
Notices		157
Statement of Editorial Policy		158
Instructions to Authors		158

Volume 159 • *February 1989* • *Number 2*

CONTENTS

Editorial

Congenital Cytomegalovirus Disease: A NOW Problem	Martha D. Yow	163

Original Articles

Specificity and Cross-Reactivity of Monoclonal Antibodies Reactive with the Core and Lipid A Regions of Bacterial Lipopolysaccharide	Matthew Pollack, John K. S. Chia, Nancy L. Koles, Maryalice Miller, and Gretchen Guelde	168

Compartmentalization of Intraalveolar and Systemic Lipopolysaccharide-Induced Tumor Necrosis Factor and the Pulmonary Inflammatory Response	Steve Nelson, Gregory J. Bagby, Bruce G. Bainton, Lawrence A. Wilson, James J. Thompson, and Warren R. Summer	189
Plasma Endotoxin as a Predictor of Multiple Organ Failure and Death in Systemic Meningococcal Disease	Petter Brandtzaeg, Peter Kierulf, Peter Gaustad, Andreas Skulberg, Johan N. Bruun, Sverre Halvorsen, and Eigil Sørensen	195
Expression of Pertussis Toxin Correlates with Pathogenesis in *Bordetella* Species	D. Monack, J. J. Munoz, M. G. Peacock, W. J. Black, and S. Falkow	205
Human Serum Antibody Responses to *Bordetella pertussis* Infection and Pertussis Vaccination	Mark G. Thomas, Keith Redhead, and Harold P. Lambert	211
Changes in IgM and IgG Antibody Concentrations in Brucellosis Over Time: Importance for Diagnosis and Follow-Up	Elena Gazapo, Juan Gonzalez Lahoz, Jose L. Subiza, Margarita Baquero, Juana Gil, and Emilio G. de la Concha	219
Detection of Bladder Bacteriuria in Patients with Acute Urinary Symptoms	K. F. Fairley and D. F. Birch	226
Piroxicam Treatment Protects Mice from Lethal Pulmonary Challenge with *Pseudomonas aeruginosa*	Daniel O. Sordelli, M. Cristina Cerquetti, Patricia A. Fontán, and Roberto P. Meiss	232
Interleukin-2 Protects Neonatal Mice from Lethal Herpes Simplex Virus Infection: A Macrophage-Mediated, γ Interferon–Induced Mechanism	Steve Kohl, Lian Sim Loo, David B. Drath, and Patricia Cox	239
Synergistic Inhibition of Epstein-Barr Virus: Transformation of B Lymphocytes by α and γ Interferon and by 3′-Azido-3′-Deoxythymidine	Jung-Chung Lin, Zhen-Xi Zhang, Ting-Chao Chou, Iain Sim, and Joseph S. Pagano	248
Immunization of Cotton Rats with the Human Respiratory Syncytial Virus F Glycoprotein Produced Using a Baculovirus Vector	M. W. Wathen, R. J. Brideau, and D. R. Thomsen	255
Adult *Ixodes dammini* on Rabbits: Development of Acute Inflammation in the Skin and Immune Responses to Salivary Gland, Midgut, and Spirochetal Components	Christine M. Wheeler, James L. Coleman, Gail S. Habicht, and Jorge L. Benach	265
Human Pythiosis Associated with Thalassemia Hemoglobinopathy Syndrome	Boonmee Sathapatayavongs, Paisan Leelachaikul, Roongnapa Prachaktam, Vichai Atichartakarn, Suthus Sriphojanart, Prasert Trairatvorakul, Sopon Jirasiritham, Suwattana Nontasut, Charindr Eurvilaichit, and Timothy Flegel	274
Comparative Antibiotic Dose-Effect Relations at Several Dosing Intervals in Murine Pneumonitis and Thigh-Infection Models	J. E. Leggett, B. Fantin, S. Ebert, K. Totsuka, B. Vogelman, W. Calame, H. Mattie, and W. A. Craig	281

Prevalence of Genital Papillomavirus Infection Among Women Attending a College Student Health Clinic or a Sexually Transmitted Disease Clinic	Nancy B. Kiviat, Laura A. Koutsky, Jorma A. Paavonen, Denise A. Galloway, Cathy W. Critchlow, Anna Marie Beckmann, James K. McDougall, Marcia L. Peterson, Claire E. Stevens, Carolyn M. Lipinski, and King K. Holmes	293
Effects of Covalently Bound Silica–Nitroimidazole Drug Particles on *Entamoeba histolytica*	D. Mirelman, F. De Meester, T. Stolarsky, G. D. Burchard, K. Ernst-Cabrera, and M. Wilchek	303
A Prospective, Randomized Study Comparing Transparent and Dry Gauze Dressings for Central Venous Catheters	J. M. Conly, K. Grieves, and B. Peters	310
AIDS Commentary		
Diagnosis of Infection with the Human Immunodeficiency Virus	John P. Phair and Steven Wolinsky	320
Concise Clinical and Laboratory Communications		
Antibodies to Human Immunodeficiency Virus in the Semen of Heterosexual Men	Laurent Belec, Alain J. Georges, Gerald Steenman, and Paul M. V. Martin	324
Kinetics of the Humoral Immune Response Measured by Antibody-Dependent Cell-Mediated Cytotoxicity and Neutralization Assays in Genital Herpesvirus Infections	Sung Hee Oh, John M. Douglas, Lawrence Corey, and Steve Kohl	328
Enhancement of Simian Varicella Virus Infection in African Green Monkeys by Recombinant Human Tumor Necrosis Factor α	Kenneth F. Soike, Christine W. Czarniecki, Gary Baskin, James Blanchard, and Denny Liggitt	331
Solid-Phase Immune Electron Microscopy and Enzyme-Linked Immunosorbent Assay for Typing of Human Rotavirus Strains by Using Polyclonal and Monoclonal Antibodies: A Comparative Study	Giuseppe Gerna, Nilda Passarani, Leanne E. Unicomb, Maurizio Parea, Antonella Sarasini, Massimo Battaglia, and Ruth F. Bishop	335
Recurrences of *Clostridium difficile* Diarrhea Not Caused by the Original Infecting Organism	Stuart Johnson, Annette Adelmann, Connie R. Clabots, Lance R. Peterson, and Dale N. Gerding	340
Genotypic Variation in Pathogenic *Escherichia coli* O157:H7 Isolated from Patients in Washington, 1984–1987	Phillip I. Tarr, Marguerite A. Neill, Carla R. Clausen, John W. Newland, Roger J. Neill, and Steve L. Moseley	344
Pneumonia in Children in the Eastern Highlands of Papua New Guinea: A Bacteriologic Study of Patients Selected by Standard Clinical Criteria	J. Barker, M. Gratten, I. Riley, D. Lehmann, J. Montgomery, M. Kajoi, H. Gratten, D. Smith, T. F. de C. Marshall, and M. P. Alpers	348
Suppression of Purified Protein Derivative–Induced Interleukin-2 Production by Interaction of CD16 (Leu 11 Reactive) Lymphocytes and Adherent Mononuclear Cells in Tuberculosis	Zahra Toossi, Kay L. Edmonds, J. Walton Tomford, and Jerrold J. Ellner	352

Correspondence

HLA Antigen Contamination of Commercial Western Blot Strips for Detecting Human Immunodeficiency Virus — Joseph J. Drabick and James R. Baker, Jr. — 357

Western Blot Analysis Poorly Detects Antibody to gpIII of Varicella-Zoster Virus — Lon Dubey, Christopher A. Gabel, and Anne Gershon — 358

Severe African Trypanosomiasis with Spurious Hypoglycemia — Roger E. Nieman, John J. Kelly, and Hetty A. Waskin — 360

Production of Interleukin-1 by Peripheral Blood Mononuclear Cells in Patients with Chronic Fatigue Syndrome — S. Morte, A. Castilla, M. P. Civeira, M. Serrano, and J. Prieto — 362

Purulent Pericarditis Due to *Yersinia enterocolitica* — Frederic Lecomte, Maryline Eustache, Jean-François Lemeland, Gerard Oksenhendler, and Guy Humbert — 363

Aseptic Meningitis Associated with Administration of Carbamazepine — Eileen Hilton and Edward M. Stroh — 363

Influenza Immunization of High-Risk Patients — Charles-Hugo Marquette — 364

Reply — George Gee Jackson — 365

Nomenclature for *Pneumocystis carinii* — Miles B. Markus — 366

Reply — Walter T. Hughes and Francis Gigliotti — 366

From the Infectious Diseases Society of America

Postdoctoral Fellowship Training Programs in Infectious Diseases/Internal Medicine — 367

Notices — 375

Volume 159 • *March 1989* • *Number 3*

CONTENTS

Annual Meeting Presentations

Introduction — Marvin Turck — 377

As It Was and As It Is: A Half-Century of Progress — Thomas H. Weller — 378

Viruses Can Cause Disease in the Absence of Morphological Evidence of Cell Injury: Implication for Uncovering New Diseases in the Future — Michael B. A. Oldstone — 384

A Personal View of Efforts in Treatment of Human Immunodeficiency Virus Infection in 1988 — Thomas C. Merigan — 390

Urinary Tract Infections: From Pathogenesis to Treatment — Walter E. Stamm, Thomas M. Hooton, James R. Johnson, Carolyn Johnson, Ann Stapleton, Pacita L. Roberts, Steve L. Moseley, and Stephan D. Fihn — 400

Prepublication Release of Scientific Data and the Right of the Public to Know: Adapting to Our Times	Edward J. Huth	407
Public Access to Experimental Drug Therapy: AIDS Raises Yet Another Conflict Between Freedom of the Individual and Welfare of the Individual and Public	Douglas D. Richman	412
The Case for Patient Access to Experimental Therapy	Martin Delaney	416
Entamoeba histolytica: From Adherence to Enteropathy	Jonathan I. Ravdin	420
Original Articles		
Resistance of Influenza A Virus to Amantadine and Rimantadine: Results of One Decade of Surveillance	Robert B. Belshe, Betty Burk, Frances Newman, Richard L. Cerruti, and Iain S. Sim	430
Human Monoclonal Antibodies to Human Cytomegalovirus	Steven K. H. Foung, Susan Perkins, Peggy Bradshaw, Judy Rowe, Linda B. Rabin, Gregory R. Reyes, and Evelyne T. Lennette	436
IgM and IgG Responses to Varicella-Zoster Virus p32/p36 Complex After Chickenpox and Zoster, Congenital and Subclinical Infections, and Vaccination	David R. Harper and Charles Grose	444
Protection of Peruvian Children Against Rotavirus Diarrhea of Specific Serotypes by One, Two, or Three Doses of the RIT 4237 Attenuated Bovine Rotavirus Vaccine	Claudio F. Lanata, Robert E. Black, Roberto del Aguila, Ana Gil, Hector Verastegui, Giuseppe Gerna, Jorge Flores, Albert Z. Kapikian, and Francis E. Andre	452
T Lymphocytes in Genital Lymph Nodes Protect Mice from Intravaginal Infection with Herpes Simplex Virus Type 2	Mark R. McDermott, Charles H. Goldsmith, Kenneth L. Rosenthal, and Leslie J. Brais	460
Detection of HIV-1 RNA in the Lamina Propria of Patients with AIDS and Gastrointestinal Disease	Cecil H. Fox, Donald Kotler, Anita Tierney, Carla S. Wilson, and Anthony S. Fauci	467
Enhanced Antibody Responses to Epstein-Barr Virus in HIV-Infected Homosexual Men	M. Abid Rahman, Lawrence A. Kingsley, Mary Kay Breinig, Monto Ho, John A. Armstrong, Robert W. Atchison, David W. Lyter, and Charles R. Rinaldo, Jr.	472
Suppression of Human Peripheral Blood Mononuclear Cell Function by Methadone and Morphine	Phillip K. Peterson, Genya Gekker, Charles Brummitt, Paul Pentel, Milton Bullock, Margaret Simpson, John Hitt, and Burt Sharp	480
The Use of a DNA Probe for Epidemiological Studies of Candidiasis in Immunocompromised Hosts	Barry C. Fox, Harry L. T. Mobley, and James C. Wade	488
Candida Antigen Latex Test for Detection of Invasive Candidiasis in Immunocompromised Patients	Marsha J. Ness, William P. Vaughan, and Gail L. Woods	495
Phaeohyphomycotic Cutaneous Disease Caused by *Pleurophoma* in a Cardiac Transplant Patient	David P. Dooley, Miriam L. Beckius, Betty S. Jeffery, C. Kenneth McAllister, William H. Radentz, Ava R. Feldman, Michael G. Rinaldi, Steven R. Bailey, and James H. Keeling	503

Molecular Analysis of the Fetal IgM Response to *Treponema pallidum* Antigens: Implications for Improved Serodiagnosis of Congenital Syphilis	Pablo J. Sánchez, George H. McCracken, Jr., George D. Wendel, Kurt Olsen, Norma Threlkeld, and Michael V. Norgard	508
Immunologic Regulation of *E. coli* K1 by Serum from Neonatal Rats is Enhanced Following Intraperitoneal Administration of Human IgG	Herbert A. Lassiter, Robert D. Christensen, and Charles J. Parker	518
DNA Polymorphisms Among *Escherichia coli* Isolated from Bacteriuric Women	John J. LiPuma, Terrence L. Stull, Sue E. Dasen, Kenneth A. Pidcock, Donald Kaye, and Oksana M. Korzeniowski	526
Priming of Polymorphonuclear Neutrophilic Leukocyte Oxidative Activity by Type 1 Pili from *Escherichia coli*	Matthew Bidwell Goetz	533
Case-Control Study of Endemic Diarrheal Disease in Thai Children	Peter Echeverria, David N. Taylor, Udom Lexsomboon, Manoon Bhaibulaya, Neil R. Blacklow, Kazumichi Tamura, and Riichi Sakazaki	543
Association of Tuberculosis and *M. tuberculosis*–Specific Antibody Levels with HLA	Graham H. Bothamley, John Swanson Beck, Geziena M. Th. Schreuder, Jo D'Amaro, Rene R. P. de Vries, Thomas Kardjito, and Juraj Ivanyi	549
The Hamster Model of Chronic *Mycobacterium avium* Complex Infection	Bienvenido G. Yangco, Carol Lackman-Smith, Carmen G. Espinoza, David A. Solomon, and Stanley C. Deresinski	556
An Outbreak of Ehrlichiosis in Members of an Army Reserve Unit Exposed to Ticks	Lyle R. Petersen, Leigh A. Sawyer, Daniel B. Fishbein, Patrick W. Kelley, Richard J. Thomas, Louis A. Magnarelli, Martha Redus, and Jacqueline E. Dawson	562
Concise Clinical and Laboratory Communications		
The Epidemiology of AIDS-Related Kaposi's Sarcoma in San Francisco	George W. Rutherford, Sandra K. Schwarcz, George F. Lemp, J. Lowell Barnhart, Kathryn J. Rauch, W. L. Warner, Timothy H. Piland, and David Werdegar	569
Two Cases of Community-Acquired Legionnaires' Disease: Evidence for Association with a Cooling Tower	David G. Addiss, Jeffrey P. Davis, Philip J. Wand, Roger M. McKinney, M. Stephen Gradus, and Ronald R. Martins	572
Human Ehrlichiosis in Oklahoma	John R. Harkess, S. A. Ewing, James M. Crutcher, Jerry Kudlac, Garry McKee, and Gregory R. Istre	576
Properties of *Escherichia coli* in Patients with Renal Scarring	H. Lomberg, M. Hellström, U. Jodal, I. Ørskov, and C. Svanborg Edén	579
Prevalence of the Putative Colonization Factors CFA/III and PCFO159:H4 in Enterotoxigenic *Escherichia coli*	M. M. McConnell and B. Rowe	582

Serum IgG Antibody to the Outer Membrane Proteins of *Campylobacter pylori* in Children with Gastroduodenal Disease — Steven Czinn, Howard Carr, Lynne Sheffler, and Stephen Aronoff — 586

Comparative in Vitro and in Vivo Activity of Racemic Praziquantel and Its Levorotated Isomer on *Schistosoma mansoni* — Xiao Shu-Hua and Brian A. Catto — 589

Correspondence

The Role of the Pharmacist in Antimicrobial Agent Therapy — Steven L. Barriere, Michael N. Dudley, Steven F. Kowalsky, Bruce Kreter, Ron E. Polk, Randall A. Prince, and Teresa Tartaglione — 593

Reply — Calvin M. Kunin — 594

Bacteremia Associated with Tympanostomy Tube Insertion — Jacob A. Lohr, F. B. Sloop, Austin Sydnor, Jr., and Leigh G. Donowitz — 594

Bacterial Endocarditis Caused by *Streptococcus suis* Type 2 — W. E. C. Peetermans, B. G. Moffie, and J. Thompson — 595

Chronic Travelers' Diarrhea in a Normal Host Due to *Isospora belli* — Nathan Shaffer and Lee Moore — 596

Tonsillar and Pharyngeal Tuberculosis in a Patient without HIV Antibodies — E. Pedrol, R. Estruch, J. Barceló, and A. Urbano-Márquez — 598

Interferon-γ and *Mycobacterium avium-intracellulare* Infection — Kathleen E. Squires, William F. Murphy, Lawrence C. Madoff, and Henry W. Murray — 599

Notices — 601

Erratum — 602

Volume 159 • *April 1989* • *Number 4*

CONTENTS

Original Articles

A Historical Study of Human T Lymphotropic Virus Type I Transmission in Barbados — Denise A. Riedel, Alfred S. Evans, Carl Saxinger, and William A. Blattner — 603

Efficacy and Safety of Vaccination of Marrow Transplant Recipients with a Live Attenuated Measles, Mumps, and Rubella Vaccine — P. Ljungman, E. Fridell, B. Lönnqvist, P. Bolme, M. Böttiger, G. Gahrton, A. Linde, O. Ringdén, and B. Wahren — 610

Liposomal Interferon-β: Sustained Release Treatment of Simian Varicella Virus Infection in Monkeys — Deborah A. Eppstein, Marjorie A. Van Der Pas, Carol A. Gloff, and Kenneth F. Soike — 616

Primary Study of Attenuated Live Hepatitis A Vaccine (H2 Strain) in Humans	J. S. Mao, D. X. Dong, H. Y. Zhang, N. L. Chen, X. Y. Zhang, H. Y. Huang, R. Y. Xie, T. J. Zhou, Z. J. Wan, Y. Z. Wang, Z. H. Hu, Y. Y. Cao, H. M. Li, and C. M. Chu	621
Regulation of Expression of Herpes Simplex Virus (HSV) Glycoprotein D in Vaccinia Recombinants Affects Their Ability to Protect from Cutaneous HSV-2 Disease	M. Wachsman, L. Aurelian, C. C. Smith, M. E. Perkus, and E. Paoletti	625
Characterization of *Campylobacter cinaedi* and *C. fennelliae* Antigens and Analysis of the Human Immune Response	Becky M. Flores, Cynthia L. Fennell, and Walter E. Stamm	635
Protective Effects of Murine Monoclonal Antibodies in Experimental Septicemia: *E. coli* Antibodies Protect Against Different Serotypes of *E. coli*	Marie-France Salles, Eliane Mandine, René Zalisz, Moncef Guenounou, and Pierre Smets	641
Dissemination of Trimethoprim-Resistant Clones of *Shigella sonnei* in Bulgaria	Momka P. Bratoeva and Joseph F. John, Jr.	648
Acute Suppurative Parotitis Caused by *Pseudomonas pseudomallei* in Children	D. A. B. Dance, T. M. E. Davis, Y. Wattanagoon, W. Chaowagul, P. Saiphan, S. Looareesuwan, V. Wuthiekanun, and N. J. White	654
Association of Recurrent Chlamydial Infection with Gonorrhea	Byron E. Batteiger, Joseph Fraiz, Wilbert J. Newhall V, Barry P. Katz, and Robert B. Jones	661
The Molecular Epidemiology of Three Biotypes of *Corynebacterium diphtheriae* in the Seattle Outbreak, 1972–1982	Marie B. Coyle, Neal B. Groman, Jennifer Q. Russell, James P. Harnisch, Myron Rabin, and King K. Holmes	670
Investigation of an Outbreak of Listeriosis: New Hypotheses for the Etiology of Epidemic *Listeria monocytogenes* Infections	Benjamin Schwartz, David Hexter, Claire V. Broome, Allen W. Hightower, Randall B. Hirschhorn, John D. Porter, Peggy S. Hayes, William F. Bibb, Bennett Lorber, and David G. Faris	680
Clonal and Variable Properties of *Neisseria meningitidis* Isolated from Cases and Carriers During and After an Epidemic in The Gambia, West Africa	Brian A. Crowe, Robert A. Wall, Barica Kusecek, Barbara Neumann, Tom Olyhoek, Hussein Abdillahi, Musa Hassan-King, Brian M. Greenwood, Jan T. Poolman, and Mark Achtman	686
Mechanisms of Bacterial Opsonization by Immune Globulin Intravenous: Correlation of Complement Consumption with Opsonic Activity and Protective Efficacy	Kuender D. Yang, James M. Bathras, Ann O. Shigeoka, John James, Seth H. Pincus, and Harry R. Hill	701
Diversity and Sources of Rapidly Growing Mycobacteria Associated with Infections Following Cardiac Surgery	Richard J. Wallace, Jr., James M. Musser, Sheila I. Hull, Vella A. Silcox, Lorraine C. Steele, Gene D. Forrester, Abdelhakim Labidi, and Robert K. Selander	708
Treatment of Experimental Invasive Aspergillosis with Novel Amphotericin B/Cholesterol-Sulfate Complexes	Thomas F. Patterson, Peggy Miniter, Jan Dijkstra, Francis C. Szoka, Jr., John L. Ryan, and Vincent T. Andriole	717

The Relationship of *Leishmania braziliensis* Subspecies and Immune Response to Disease Expression in New World Leishmaniasis	Nancy Gore Saravia, Liliana Valderrama, Maricel Labrada, Ana Fernanda Holguín, Claudia Navas, Gloria Palma, and Kristen A. Weigle	725
Recent Primary Toxoplasma Infection Indicated by a Low Avidity of Specific IgG	Klaus Hedman, Maija Lappalainen, Ilkka Seppälä, and Olli Mäkelä	736
Concise Clinical and Laboratory Communications		
Molecular Analysis of HTLV-I Proviral Integration and T Cell Receptor Arrangement Indicates That T Cells in Tropical Spastic Paraparesis Are Polyclonal	Steven J. Greenberg, Steven Jacobson, Thomas A. Waldmann, and Dale E. McFarlin	741
Azidothymidine Steady-State Pharmacokinetics in Patients with AIDS and AIDS-Related Complex	Oscar L. Laskin, Paulo de Miranda, and M. Robert Blum	745
Oral Ribavirin Therapy for Subacute Sclerosing Panencephalitis	John W. Ogle, Philip Toltzis, W. Davis Parker, Noberto Alvarez, Kenneth McIntosh, Myron J. Levin, and Brian A. Lauer	748
Exanthem Subitum and Antibody to Human Herpesvirus-6	Kohji Ueda, Koichi Kusuhara, Mizuo Hirose, Kenji Okada, Chiaki Miyazaki, Ken Tokugawa, Minako Nakayama, and Koichi Yamanishi	750
Prolonged Efficacy of Rhesus Rotavirus Vaccine in Swedish Children	Leif Gothefors, Goran Wadell, Per Juto, K. Taniguchi, Albert Z. Kapikian, and Roger I. Glass	753
Virus-Induced Immunosuppression: Infection of Peripheral Blood Mononuclear Cells and Suppression of Immunoglobulin Synthesis During Natural Measles Virus Infection of Rhesus Monkeys	Michael B. McChesney, Robert S. Fujinami, Nicholas W. Lerche, Preston A. Marx, and Michael B. A. Oldstone	757
Demonstration of a Barrier to Transplacental Passage of Murine Enteroviruses in Late Gestation	Mark J. Abzug, Harley A. Rotbart, and Myron J. Levin	761
Comparative Efficacy of Two, Three, or Four Doses of TY21a Live Oral Typhoid Vaccine in Enteric-Coated Capsules: A Field Trial in an Endemic Area	Catterine Ferreccio, Myron M. Levine, Hector Rodriguez, Rodrigo Contreras, and the Chilean Typhoid Committee	766
ABO Blood Groups and Cholera: New Observations on Specificity of Risk and Modification of Vaccine Efficacy	John D. Clemens, David A. Sack, Jeffrey R. Harris, J. Chakraborty, M. R. Khan, S. Huda, Faruque Ahmed, Joe Gomes, M. R. Rao, Ann-Mari Svennerholm, and Jan Holmgren	770
Continuous Peritoneal Infusion of Shiga-like Toxin II (SLT II) as a Model for SLT II–Induced Diseases	Timothy J. Barrett, Morris E. Potter, and I. Kaye Wachsmuth	774
Plasma Endotoxin: Increased Levels in Neutropenic Patients Do Not Correlate with Fever	Joseph W. Shands, Jr., and Christine McKimmey	777
Effect of Tissue-Type Plasminogen Activator (t-PA) on the Treatment with Benzylpenicillin of Rabbits with Experimental *Streptococcus sanguis* Endocarditis	A. G. M. Buiting, J. Thompson, J. J. Emeis, H. Mattie, E. J. P. Brommer, and R. van Furth	780

Effect of Combined Therapy with Ansamycin, Clofazimine, Ethambutol, and Isoniazid for *Mycobacterium avium* Infection in Patients with AIDS	Bruce D. Agins, Daniel S. Berman, Debra Spicehandler, Wafaa El-Sadr, Michael S. Simberkoff, and James J. Rahal	784
Tumor Necrosis Factor in Leprosy Patients	Célio L. Silva, and Norma T. Foss	787
Differences in Virulence and Development of Encephalitis During Chronic Infection Vary with the Strain of *Toxoplasma gondii*	Yasuhiro Suzuki, Frances K. Conley, and Jack S. Remington	790
Serologic Response to the 96,000-Da Surface Antigen of Pathogenic *Entamoeba histolytica*	Bruce E. Torian, Sharon L. Reed, Becky M. Flores, James Plorde, and Walter E. Stamm	794
Immunoregulation of Hepatic Fibrosis in Murine Schistosomiasis Japonica	G. Richard Olds and Thomas F. Kresina	798
Correspondence		
Immunotherapy for Gram-Negative Septic Shock	Richard Greenberg	802
Reply	Thierry Calandra, Michel P. Glauser, and the Swiss-Dutch J5 Immunoglobulin Study Group	802
High-Dose Dexamethasone in Malaria	Brian Cooper	803
Reply	Stephen L. Hoffman	803
Tick-Borne Relapsing Fever in Intravenous Drug Abusers	L. López-Cortés, F. Lozano de Léon, J. M. Gómez-Mateos, A. Sánchez-Porto, and C. Obrador	804
Borrelia burgdorferi Attachment to Mammalian Cells	Karim E. Hechemy, William A. Samsonoff, Mary McKee, and Joseph M. Guttman	805
Single-Dose Therapy for Oral Candidiasis with Fluconazole in HIV-Infected Adults: A Pilot Study	J. P. Chave, A. Cajot, J. Bille, and M. P. Glauser	806
High Seropositivity of Japanese Homosexual Men for Amebic Infection	Tsutomu Takeuchi, Eiichi Okuzawa, Tomoyoshi Nozaki, Seiki Kobayashi, Masashi Mizokami, Nobutoshi Minoshima, Masahiko Yamamoto, and Shin Isomura	808
Multiple Organ Involvement by *Legionella pneumophila* in a Fatal Case of Legionnaires' Disease	R. Monforte, F. Marco, R. Estruch, and E. Campo	809
Nontoxigenic *Vibrio cholerae* Wound Infection After Exposure to Contaminated Lake Water	Gerit D. Mulder, Thomas M. Ries, and Thomas R. Beaver	809
Vertebral Osteomyelitis Due to *Haemophilus aphrophilus*: Treatment with Ceftriaxone	R. G. Nahass, S. Cook, and M. P. Weinstein	811
Notices		813

Volume 159 • *May 1989* • *Number 5*

CONTENTS

Original Articles

Interferon Production in Patients Infected with HIV-1	S. Rossol, R. Voth, H. P. Laubenstein, W. E. G. Müller, H. C. Schröder, K. H. Meyer zum Büschenfelde, and G. Hess	815
The Antiviral Effect of Zidovudine and Ribavarin in Clinical Trials and the Use of p24 Antigen Levels as a Virologic Marker	Stephen A. Spector, Caroline Kennedy, J. Allen McCutchan, Samuel A. Bozzette, Richard G. Straube, James D. Connor, and Douglas D. Richman	822
The Use of Intravenous Ribavirin To Treat Influenza Virus–Associated Acute Myocarditis	C. George Ray, Timothy B. Icenogle, Linda L. Minnich, Jack G. Copeland, and Thomas M. Grogan	829
Synergistic Inhibition of Human Immunodeficiency Virus Type 1 (HIV-1) Replication In Vitro by Recombinant Soluble CD4 and 3′-Azido-3′-Deoxythymidine	Victoria A. Johnson, Margaret A. Barlow, Ting-Chao Chou, Richard A. Fisher, Bruce D. Walker, Martin S. Hirsch, and Robert T. Schooley	837
A Prospective Study of the Effects of Acyclovir Treatment on the HSV-2 Lymphoproliferative Response of Persons with Frequently Recurring HSV-2 Genital Infections	L. Frenkel, E. Pineda, E. Garratty, H. Fall, M. Dillon, and Y. Bryson	845
Humoral Immune Response to Cytomegalovirus Towne Vaccine Strain and to Toledo Low-Passage Strain	Eva Gönczöl, John Ianacone, Giuliano Furlini, Wenzhe Ho, and Stanley A. Plotkin	851
Protective Effects of Towne Cytomegalovirus Vaccine Against Low-Passage Cytomegalovirus Administered as a Challenge	Stanley A. Plotkin, Stuart E. Starr, Harvey M. Friedman, Eva Gönczöl, and Robert E. Weibel	860
Clearance of a Persistent Human Enterovirus Infection of the Mouse Central Nervous System by the Antiviral Agent Disoxaril	B. Jubelt, A. K. Wilson, S. L. Ropka, P. L. Guidinger, and M. A. McKinlay	866
Lipopolysaccharide (LPS)-Reactive Monoclonal Antibodies Fail To Inhibit LPS-Induced Tumor Necrosis Factor Secretion by Mouse-Derived Macrophages	John K. S. Chia, Matthew Pollack, Gretchen Guelde, Nancy L. Koles, Maryalice Miller, and Martin E. Evans	872
Pathogenesis of Shigella Diarrhea. XIV. Analysis of Shiga Toxin Receptors on Cloned HeLa Cells	Mary Jacewicz, Henry A. Feldman, Arthur Donohue-Rolfe, K. A. Balasubramanian, and Gerald T. Keusch	881
Melioidosis: A Major Cause of Community-Acquired Septicemia in Northeastern Thailand	Wipada Chaowagul, Nicholas J. White, David A. B. Dance, Yupaporn Wattanagoon, Pimjai Naigowit, Timothy M. E. Davis, Sornchai Looareesuwan, and Nirun Pitakwatchara	890

Determinants of Emergence of Antibiotic-Resistant *Neisseria gonorrhoeae*	Edward W. Hook III, William E. Brady, Cindy A. Reichart, Dawn M. Upchurch, Linda A. Sherman, and Judith N. Wasserheit	900
Host and Bacterial Factors Associated with *Haemophilus influenzae* Type b Disease in Minnesota Children Vaccinated with Type b Polysaccharide Vaccine	Dan M. Granoff, Katherine Sheetz, Janardan P. Pandey, Moon H. Nahm, Joan H. Rambeck, Jean L. Jacobs, James Musser, Robert K. Selander, Mustafa Kabeer, Trudy V. Murphy, and Michael T. Osterholm	908
Induction of Meningeal Inflammation by Outer Membrane Vesicles of *Haemophilus influenzae* Type b	Mahmoud M. Mustafa, Octavio Ramilo, George A. Syrogiannopoulos, Kurt D. Olsen, George H. McCracken, Jr., and Eric J. Hansen	917
Invasion of the Inner Ear by *Haemophilus influenzae* Type b in Experimental Meningitis	Sheldon L. Kaplan, Edith P. Hawkins, Mark W. Kline, Gail S. Patrick, and Edward O. Mason, Jr.	923
Netilmicin in the Treatment of Gram-Negative Bacteremia: Single Daily versus Multiple Daily Dosage	A. W. Sturm	931
Evaluation of Antibiotic Diffusion into Cardiac Vegetations by Quantitative Autoradiography	Anne-Claude Cremieux, Bernard Maziere, Jean-Marie Vallois, Michèle Ottaviani, Annabelle Azancot, Hanna Raffoul, Anne Bouvet, Jean-Jacques Pocidalo, and Claude Carbon	938
Polyaspartic Acid Prevents Experimental Aminoglycoside Nephrotoxicity	D. N. Gilbert, C. A. Wood, S. J. Kohlhepp, P. W. Kohnen, D. C. Houghton, H. C. Finkbeiner, J. Lindsley, and W. M. Bennett	945
Bronchopulmonary Cross-Colonization and Infection Related to Mycobacterial Contamination of Suction Valves of Bronchoscopes	Paul W. Wheeler, Deanie Lancaster, and Allen B. Kaiser	954
Role of Complement-Derived and Bacterial Formylpeptide Chemotactic Factors in the In Vivo Migration of Neutrophils in Experimental *Escherichia coli* Pyelonephritis in Rats	Pascal R. Meylan and Michel P. Glauser	959
Erythromycin and Roxithromycin Potentiate Human Neutrophil Locomotion In Vitro by Inhibition of Leukoattractant-Activated Superoxide Generation and Autooxidation	Ronald Anderson	966
Concise Clinical and Laboratory Communications		
Immunized Mice Challenged with Herpes Simplex Virus by the Intranasal Route Show Protection Against Latent Infection	James F. Rooney, Charles Wohlenberg, Kenneth J. Cremer, and Abner Louis Notkins	974
Incidence of Hepatitis Delta Virus Infection in Acute HbsAg-Negative Hepatitis	Francesco Caredda, Spinello Antinori, Carla Pastecchia, Paola Coppin, Mario Palla, Antonio Ponzetto, Mario Rizzetto, and Mauro Moroni	977

The Human Gastric Bactericidal Barrier: Mechanisms of Action, Relative Antibacterial Activity, and Dietary Influences	Walter L. Peterson, Philip A. Mackowiak, Cora C. Barnett, Margaret Marling-Cason, and Marcia L. Haley	979
Bacteremia Associated with Percutaneous Extraction of Biliary Tract Stones	D. E. Low, J. P. Shoenut, G. Durbahn, I. M. Morrow, G. K. Harding, J. K. Kennedy, and M. Lautatzis	984
Comparative Efficacy of Amoxicillin-Clavulanate, Cloxacillin, and Vancomycin Against Methicillin-Sensitive and Methicillin-Resistant *Staphylococcus aureus* Endocarditis in Rats	L. Cantoni, A. Wenger, M. P. Glauser, and J. Bille	989
In Vitro and In Vivo Activity of Azithromycin (CP 62,993) Against the *Mycobacterium avium* Complex	Clark B. Inderlied, Peter T. Kolonoski, Martin Wu, and Lowell S. Young	994
Correspondence		
Serum IgG and IgM Responses in Mumps Infection as Measured by ELISA Using a Guinea Pig Capture Antibody Raised by Intranasal Immunization	Per Juto, Bo Settergren, and Lucia Mincheva-Nilsson	998
Zoster in Normal Children After Varicella Vaccine	Stanley A. Plotkin, Stuart E. Starr, Karen Connor, and David Morton	1000
Use of Laser Vaporization for Management of Extensive Genital Tract Condyloma Acuminata During Pregnancy	Gary D. V. Hankins, Terry L. Hammond, Russell R. Snyder, and Larry C. Gilstrap III	1001
Cervicovaginal Infection with Group B Streptococci Among Pregnant Mexican Women	Fortino Solorzano-Santos, Gabriela Echaniz-Aviles, Carlos J. Conde-Glez, Ernesto Calderon-Jaimes, Jose Luis Arredondo-Garcia, and Magdelena Beltran-Zuniga	1003
In Vivo Selection of a Cephamycin-Resistant, Porin-Deficient Mutant of *Klebsiella pneumoniae* Producing a TEM-3 β-Lactamase	B. Pangon, C. Bizet, A. Buré, F. Pichon, A. Philippon, B. Regnier, and L. Gutmann	1005
Laparoscopy in the Diagnosis of Peritoneal Tuberculosis	J. Mark Fitzgerald and Richard I. Menzies	1007
Disseminated Candidiasis in a Drug Addict Not Using Heroin	Claude Scheidegger and Reno Frei	1007
Notices		1009
Erratum		1009

Volume 159 • *June 1989* • *Number 6*

CONTENTS

Tribute

Hugh Crawford Dillon, Jr., 1930–1988 — Barry M. Gray and C. Warren Derrick — 1011

Original Articles

Prevalence of Cytomegalovirus Antibody in Subjects Between the Ages of 6 and 22 Years — Najia H. White, Martha D. Yow, Gail J. Demmler, H. James Norton, James Hoyle, Kay Pinckard, Clifford Mishaw, and Susan Pokorny — 1013

Nasopharyngeal Secretory Antibody Response to Poliovirus Type 3 Virion Proteins Exhibit Different Specificities After Immunization with Live or Inactivated Poliovirus Vaccines — Getu Zhaori, Martha Sun, Howard S. Faden, and Pearay L. Ogra — 1018

HTLV-I Infection in Papua New Guinea: Evidence for Serologic False Positivity — J. N. Weber, N. Banatvala, S. Clayden, K. P. W. J. McAdam, S. Palmer, H. Moulsdale, J. Tosswill, P. Dilger, R. Thorpe, and S. Amann — 1025

Serum β_2-Microglobulin Decreases in Patients with AIDS or ARC Treated with Azidothymidine — Mark A. Jacobson, Donald I. Abrams, Paul A. Volberding, Peter Bacchetti, Judith Wilber, Richard E. Chaisson, Suzanne Crowe, Walter Howard, and Andrew Moss — 1029

Detection of Cell-Free Human Immunodeficiency Virus in Cerebrospinal Fluid by Using Immune Scanning Electron Microscopy — A. Sönnerborg, R. Nybom, S. Britton, A. Ehrnst, M. Forsgren, P. H. Larsson, Ö. Strannegård, and J. Andersson — 1037

Enterically Transmitted Non-A, Non-B Hepatitis: Identification of Virus-Associated Antigen in Experimentally Infected Cynomolgus Macaques — Krzysztof Krawczynski and Daniel W. Bradley — 1042

Biologic Potential of Amantadine-Resistant Influenza A Virus in an Avian Model — William J. Bean, Stephen C. Threlkeld, and R. G. Webster — 1050

Perspective: HEp-2 Cell Adherence as an Assay for Virulence Among Diarrheagenic *Escherichia coli* — John J. Mathewson and Alejandro Cravioto — 1057

Enteroaggregative *Escherichia coli* Associated with Persistent Diarrhea in a Cohort of Rural Children in India — M. K. Bhan, P. Raj, M. M. Levine, J. B. Kaper, N. Bhandari, R. Srivastava, R. Kumar, and S. Sazawal — 1061

Amdinocillin Treatment of Catheter-Associated Bacteriuria in Rabbits — Merle E. Olson, J. Curtis Nickel, Antoine E. Khoury, Douglas W. Morck, Roy Cleeland, and J. William Costerton — 1065

Oral Ciprofloxacin and a Monoclonal Antibody to Lipopolysaccharide Protect Leukopenic Rats from Lethal Infection with *Pseudomonas aeruginosa* — Hugh H. Collins, Alan S. Cross, Arthur Dobek, Steven M. Opal, J. Bruce McClain, and Jerald C. Sadoff — 1073

Functional Affinity of Antibody to the *Haemophilus influenzae* Type b Polysaccharide — William R. Griswold, Alexander H. Lucas, John F. Bastian, and Gordon Garcia — 1083

Nonperforative Appendicitis: A Continuing Surgical Dilemma — William Browder, Jeffrey W. Smith, Luciana M. Vivoda, and Ronald Lee Nichols — 1088

Inducible Resistance to Vancomycin in *Enterococcus faecium* D366	Russell Williamson, Suleiman Al-Obeid, Janet H. Shlaes, Fred W. Goldstein, and David M. Shlaes	1095
Experimental *Chlamydia trachomatis* Salpingitis in Mice: Initial Studies on the Characterization of the Leukocyte Response to Chlamydial Infection	Dorothy L. Patton, Daniel V. Landers, and Julius Schachter	1105
Countrywide Epidemics of *Chlamydia pneumoniae*, Strain TWAR, in Scandinavia, 1981–1983	J. Thomas Grayston, Carl Mordhorst, Anne-Lise Bruu, Sirkka Vene, and San-Pin Wang	1111
Concise Clinical and Laboratory Communications		
Evaluation of the Antiviral Effect of Rifabutin in AIDS-Related Complex	John Torseth, Gulshan Bhatia, Scott Harkonen, Carroll Child, Michael Skinner, William S. Robinson, Terrence F. Blaschke, and Thomas C. Merigan	1115
Recombinant Vaccinia Viruses and the Development of Immunization Strategies Using Influenza Virus	Peter C. Doherty, William Allan, David B. Boyle, Barbara E. H. Coupar, and Marion E. Andrew	1119
Identification of a Unique Spotted Fever Group Rickettsia from Humans in Japan	Takahiro Uchida, Xuejie Yu, Tsuneo Uchiyama, and David H. Walker	1122
Inoculum Size in Shigellosis and Implications for Expected Mode of Transmission	Herbert L. DuPont, Myron M. Levine, Richard B. Hornick, and Samuel B. Formal	1126
The Activity of Isoxazolyl Penicillins in Experimental Staphylococcal Infection	J. Renneberg and A. Forsgren	1128
Activity of Various Glycopeptides Against an Inducibly Vancomycin-Resistant Strain of *Enterococcus faecium* (D366)	David M. Shlaes, Suleiman Al-Obeid, Janet H. Shlaes, and Russell Williamson	1132
The Antigenic Specificity of a Serum Factor–Induced Phenotypic Shift in *Hemophilus influenzae* Type b, Strain Eag	Mano Kuratana, Marilyn R. Loeb, Eric J. Hansen, and Porter Anderson	1135
Seroepidemiology of Group B Streptococcus Type III Colonization at Delivery	Barry M. Gray, David G. Pritchard, and Hugh C. Dillon, Jr.	1139
Analysis of IgA Antibodies to Lipopolysaccharide in *Yersinia*-Triggered Reactive Arthritis	Kaisa Granfors, Minoru Ogasawara, Jeri L. Hill, Riitta Lahesmaa-Rantala, Auli Toivanen, and David Tak Yan Yu	1142
Antigenemia in a Rabbit Model of Invasive Aspergillosis	Peter Phillips and Greg Radigan	1147
The Efficacy of Ivermectin in the Chemotherapy of Gastrointestinal Helminthiasis in Humans	David O. Freedman, Willadene S. Zierdt, Aracely Lujan, and Thomas B. Nutman	1151
Correspondence		
Failure of Intravenous Vancomycin and Intranvenous Metronidazole to Prevent or Treat Antibiotic-Associated Pseudomembranous Colitis	Susan L. Oliva, B. Joseph Guglielmo, Richard Jacobs, and Vincent G. Pons	1154
Reply	D. Kleinfeld and S. T. Donta	1155

Risk of Developing AIDS in Newly Seropositive Intravenous Drug Abusers	G. Rezza, A. Lazzarin, G. Angarano, A. Sinicco, R. Pristerà, L. Ortona, M. Barbanera, B. Salassa, U. Tirelli, F. Aiuti, P. Costigliola, S. Gafà, and F. Menniti-Ippolito	1156
Surrogate Markers for HIV Incidence Among Homosexual Men	Godfried J. P. van Griensven, Johanna A. R. van den Hoek, Anne Leentvaar, and Roel A. Coutinho	1157
First Isolates of *Rickettsia conorii* in Spain Using a Centrifugation-Shell Vial Assay	E. Espejo-Arenas and D. Raoult	1158
Osteoarticular Infection Due to *Coxiella burnetti*	D. Raoult, G. Bollini, and H. Gallais	1159
Cryptosporidiosis in a Rural Community in Central Mexico	R. Soave, J. Ruiz, V. Garcia-Saucedo, C. Garrocho, and B. H. Kean	1160
1989 IDSA Meeting		1163
AIDS Training Program		1171
Reviewers for Volume 159		1173
Index for Volume 159		1176